Volume VIII, No. 10 66 October, 1932

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Volume VIII | October, 1932 | Number 10

«

INSECTICIDE and Disinfectant Section, which is included as a department of every issue of SOAP, begins on page 69. Oil, Fat & Soap Production Section begins on page 59. These sections contain news, articles and editorial opinion of particular interest to their respective industries.

«

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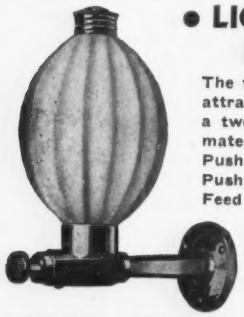

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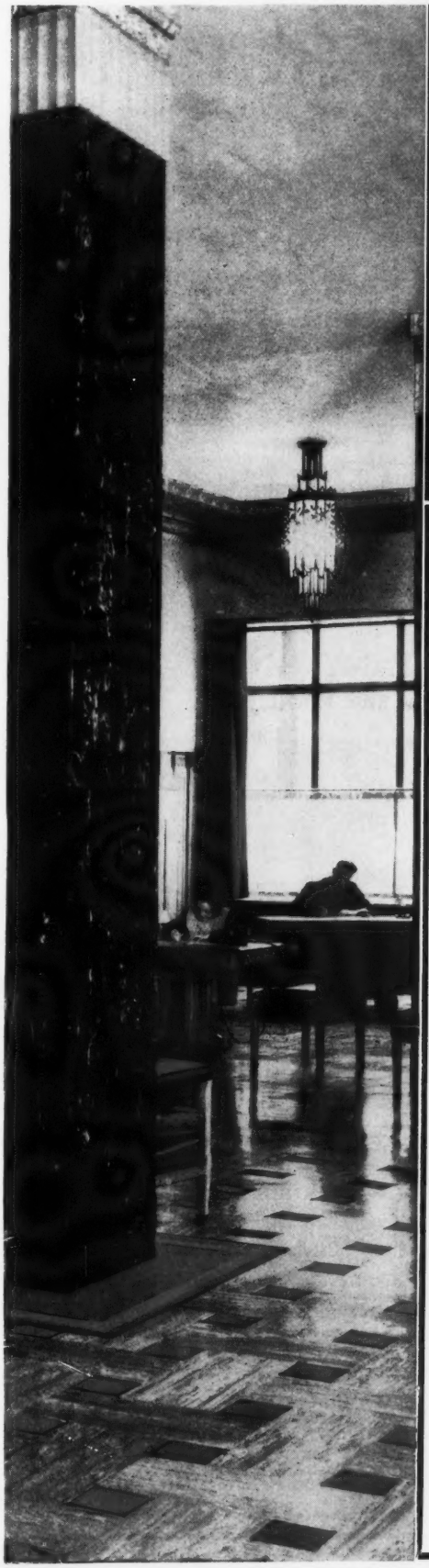

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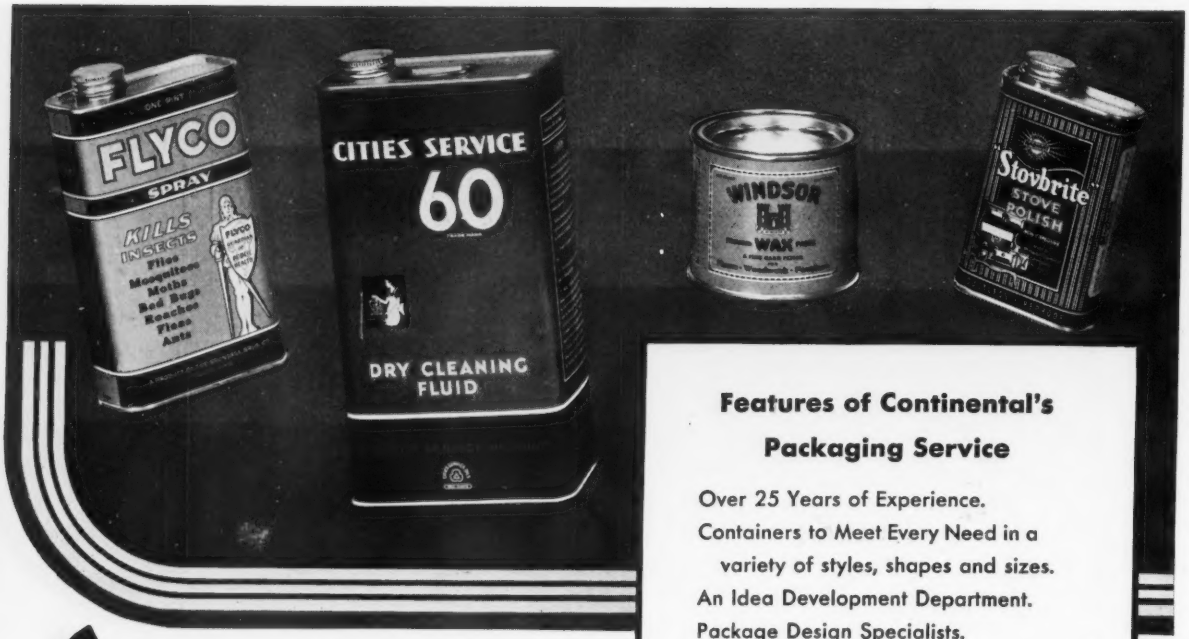

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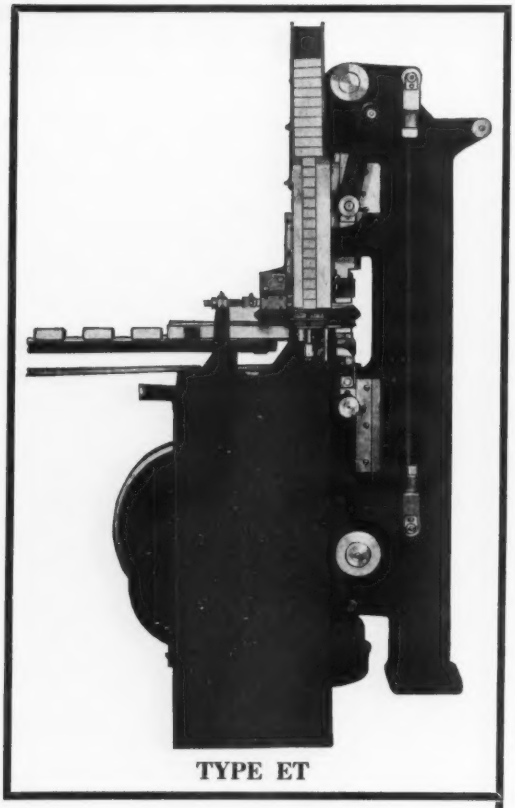

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SOAP

Volume Eight Number Ten

Interpreting a Price Advance

PRICE advances in two minor brands by a leading American soap maker about a month ago were received with much hullabaloo by some daily newspapers and trade publications. They interpreted the change as a general advance in important soap brands, which of course, was not the case. The higher prices were for "price" brands or fighting brands. Practically all the nationally advertised products remain unchanged in price, some of them at the lowest levels of the past two decades. That there was also an upward movement in bulk tallow chip prices was entirely apart from the revisions noted.

Higher prices for "price" brands, while regular brands remain unchanged, may be very significant in the soap market. The first step in retiring the fighting brands to the rear rank, and eventually to oblivion, seems to have been taken. Shifting sales emphasis to the well-known brands on which a fortune in advertising has been spent over the past twenty years, is just good plain merchandising sense.

With continued strength in raw material prices, it is only a question of time when all soap prices must advance. If raw material replacement costs are used as a basis for reducing prices, why should they not also be the basis for higher prices when a shift in the market trend takes place?

—o—

Private Brands

AN enormous increase in the dollar volume of private brand sales in chain stores has taken place since 1925, according to a report of the Federal Trade Commission which investigated the matter for the United States Senate. In the grocery and drug chains, which of course are of greatest interest to the manufacturers of soap and allied products, the sale of private brand merchandise is still on the rise. The chief reasons which we glean from the report for this increase in private brand business are lower prices to the consumer in most cases, wider margin of profit for the store resulting in greater sales effort to push the private brand.

Most manufacturers are quite familiar with the story of the sale of private brand soap products over the past few years. Smaller manufacturers, mostly with lower material costs and lower overhead, went after the private brand business at lower and ever lower prices. The price inducement has been an important one to chain buyers, and has been made possible only by the steadily receding material costs of some soap makers,

—receding costs which operated almost entirely to the advantage of the smaller soap manufacturer with his restricted material inventories. So threatening did this private brand competition become, especially when soap prices approached their lowest levels, that manufacturers of standard brands not only turned to the so-called "fighting brands" to meet low prices, but also entered the private brand markets on a much wider scale themselves. In some cases, exact duplicate products of nationally advertised soap products, were, and are, sold under private brand, or unbranded, by the national brand makers themselves at prices approximating half of the price for their standard brand merchandise.

We wonder if the increase in private brand soap business has not been more or less a natural accompaniment of the complex raw material situation of the past few years,—incidental, rather than a definite trend in itself. Is this movement temporary? Is it likely to be reversed with a reversal in the raw material situation? Only time will answer these questions. In fifteen years of studying this problem of brands, we have seldom failed to see the choice of a purchaser favor the standard advertised brand when all other factors were equal. Whether the American public is getting away from this idea in buying, and is more willing to listen to the private brand sales argument of the man behind the counter, remains to be seen. However, it seems as though low price has been the strongest of all sales arguments over the past few years. While the low prices last, the argument is effective, but when prices go up, —what then?

—o—

Rosin

FIGURES for 1932 gum rosin production show a sharp drop from last year and the year before. An upturn in prices has accompanied the smaller output and reduction of available stocks. Although the production dropped thirty per cent this year, stocks on hand as of September first were still close to fifty per cent larger than the average for the past six or seven years. However, reports indicate that the larger soap makers have been heavy buyers since September first, and that their purchases have been sufficient to cut deeply into reserve stocks.

Lower production and reduced stocks have already had a strengthening effect on the market. The higher prices have done much to clear up the banking situation in the rosin centers. The wood rosin market which had been depressed to a great degree as a reflection of the gum rosin market, is in a much stronger position today. Sentiment among rosin producers and distributors has turned distinctly optimistic. With many of the weakening influences removed, a setting of the stage for a further advance in prices would not be surprising.

—o—

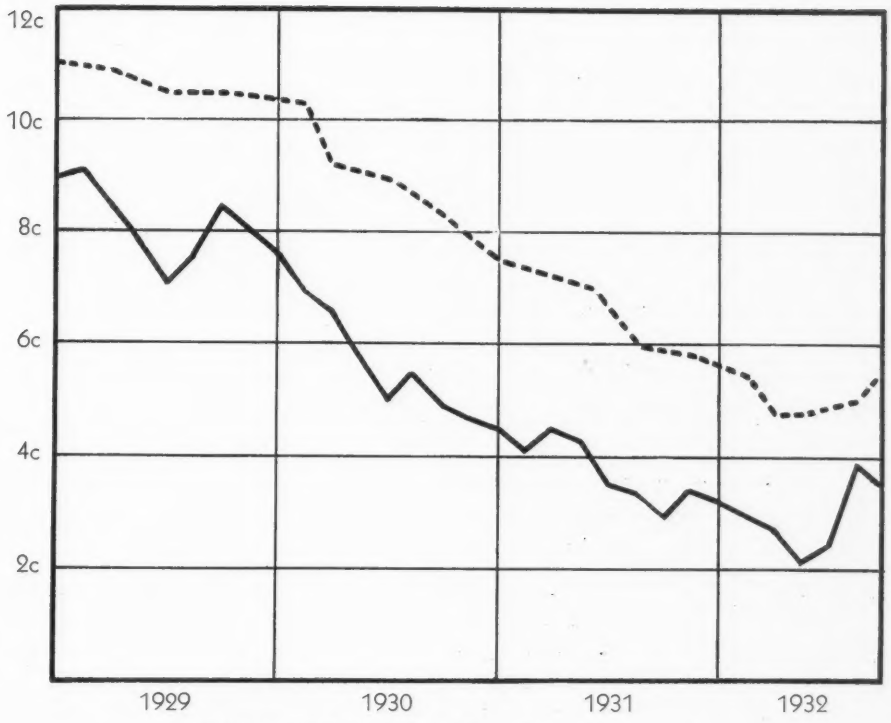
Bankers or Soap Makers?

MANY buyers of soap specialties for further manufacture into liquid soaps, shampoos, scrubbing soaps, and for distribution, are demanding in numerous cases an extension of ninety days or more credit, and in some cases, as much as six months. The sad feature is that any number of soap manufacturers are willing to grant terms such as these. That the buyers are taking the fullest advantage of a competitive situation is quite apparent. They are not only playing one manufacturer against the other in the matter of price, but in credit terms as well.

Any manufacturer of soap specialties who desires to engage in private banking and financing of his customers, is at liberty to do so, but he is certainly going rather far afield to get business. These same buyers who demand three and six months credit from him, are buying other products from some of the larger soap manufacturers and paying strictly in thirty days. Why? Because they know that they have to or they will not get the goods. It takes a little nerve to pass up an order, but this is about the only way these long-term credit fellows can be cured. If their credit at a bank is not good enough to borrow money to carry on their business, why should any soap maker take the risk of extending them similar credit without security or interest?

—o—

Don't quit all sales efforts and then complain about the poor state of business. It's not logical.



Tallow and Tallow Chip Soap Prices Compared

Quotations on tallow, (solid line), and tallow chip soap, (dotted line), in cents per pound, from January 1, 1929, to October 1, 1932, inclusive. Sharp rise in tallow market in recent months reflected in tallow chip prices.

SOAP PRICES—

Trend Definitely Upward?

THAT bitter price competition has caused the soap industry more grief this year than during any period of the past twenty years, is apparently fact. For two years preceding this last July, the trend of soap prices was downward, but the major portion of the decline was in bulk industrial soaps. Until early this year, sharp cuts in prices for nationally advertised brands of packaged soap products were more or less conspicuous by their absence. During the first six months of 1932, however, prices for most well-known brands were cut, in some cases as much as thirty per cent at one time. It is at these bottom levels that most national brands stand today. How long will it be before manufacturers will be forced to revise these prices upward?

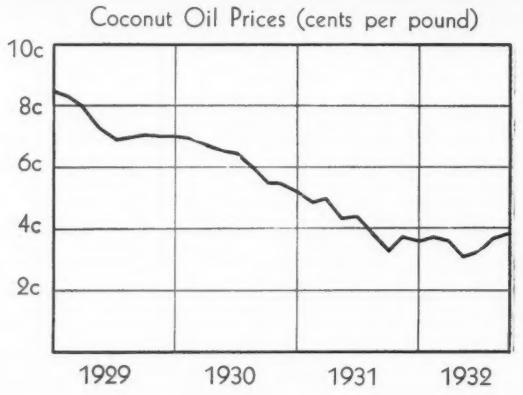
Some soap prices which broke to lowest levels in June and July of this year, have shown a distinctly firmer tone over the past sixty days and now seem to be pointing definitely upward. Three successive advances, each of a quarter-cent a pound, have occurred in the price of industrial tallow chip soap since August 23. The current price is 5½c pound for regular 88% high titre tallow chip, this price applying to car lots. The lowest point was reached during the summer months, when 4¾c pound was the base price for car lots. How low this price was can only be appreciated by comparing it with quotations of three years ago, when the price was 11c pound.

Since January, 1929, the trend of soap prices has been steadily downward, following raw material prices in their sustained drop month after month. The downward trend was not so apparent in 1929, as manufacturers then were uncertain as to the future prices of their raw materials and resisted any tendency to lower soap prices. In March, 1930, however, partly as a result of the steadily falling price of tallow, and partly as the result of a competitive fight to control certain markets, a sharp break in the price of tallow chip was precipitated

bringing the market down to 9c pound. Retaliation resulted in disorganization of the market and successive declines followed, points in the drop being as follows: January, 1931, 7½c pound, September, 1931, 6c, March, 1932, 5½c, and April, 1932, 4¾c. In each case the price of 25 to 50 barrel lots ranged approximately a half cent higher, with single barrels quoted a cent a pound above the less-carlot price. The price of low titre soap was in each case a half cent a pound below the price of the tallow chip.

IF it had been possible for the tallow market to go any lower, soap prices might still be declining, for most soap manufacturers showed no apparent ability to do anything except follow the raw material markets down. Each successive drop in tallow prices was followed by a new cut in soap selling prices, the smaller manufacturers who were the leaders in this cut-throat competition taking this as the way of least resistance to increase individual sales. In early August of this year, however, the tallow market moved sharply upward, gaining a cent a pound within the space of a month. It shortly became apparent that some large soapers had stolen a march on their competitors, and had practically cleaned the market of low priced tallow. City extra tallow, which at the low point in June sold for as little as 2⅛c pound, was quoted late in September as high as 4c pound. It has eased off a little in the past two weeks, but the advance has been sufficient to narrow sharply the margin between cost and selling price, and to convince small soap makers of the desirability of advancing prices. The car lot price on tallow chip soap advanced to 5c pound on August 23, to 5¼c on the 29th of that month and to 5½c pound on September 16th. In the opinion of many soap makers the advance in soap prices has not yet been sufficient to offset the higher cost of raw material, and a continuation of the advance is expected.

SHORTLY after the start of the advance in the price of bulk tallow chip, outlined above, another advance got under way, this being in prices of unadvertised laundry soap for the retail trade. On September 12th, an announcement of considerable significance was issued by one of the large soap manufacturers. Price advances were made in two of its "fighting brands" which were introduced some time ago to carry on the competitive battle, while an attempt was made to protect the prices of the company's advertised brands. The first of these "fighting brands," yellow rosin laundry soap packed in boxes of sixty bars, had been selling as low as $1.80 a box. This is one of the soaps,—a giant fourteen ounce bar,—which flooded the chain store market earlier this year. Its price was advanced September 12th to $2.10 a box, an increase of 16 2-3%. The other advance was made in the price of the company's five pound package of soap flakes which had been selling at 3¾c a pound. The new price was set at 4½c pound, an increase of 20%. This advance was welcomed by the soap trade



generally for in recent months, there has been more loss than profit in the giant soap flake retail package. The first firms in the five-pound package field did fairly well for a time, until competition removed all profit from this line by cutting selling prices even below the price of chip soap in barrels. The recent advance, if followed and extended, will again present the possibility of a decent profit margin on the large flake package.

No advances have as yet been made in the prices of nationally advertised brands by leading manufacturers. Most advertised brands were reduced sharply early this past summer, and are still selling at their lows, in some cases, the lowest in twenty years. This situation, coupled with the advance in price of the "fighting brands," leads to the speculation that at least one company has abandoned its battle on the old front, shifted its strategy and adopted a new plan of letting the advertised brands lead the competitive fight.

WHILE this intensive action has been going on in the laundry soap market, signs of life have also been observed in the toilet soap trade. Leaders in this field estimate that quotations on *new* business have advanced as much as 20% over the last three months, although of course much soap manufactured on contract is still moving into consumption at the old low levels. To get an idea of how sharply toilet soap prices had declined up to the middle of this year, one must recall that three or four years ago the standard retail price of a four ounce cake of moderately high quality soap was 7c to 10c in the chain stores. In May of this year, the chains were offering a larger 4½-ounce cake at three for 10c. Since then, due to the rise in the tallow market and the higher price of coconut oil, several advances have been made. One maker reports that he would not consider accepting business, which he was glad to close in May, at anything less than a twenty per cent advance over then prevailing prices. Indications are that chain and department store contracts on toilet soap for 1933 will be written at higher prices, as few soap makers will desire to tie themselves up to a 1932 selling price level while tallow gives every appearance of having reached its low point and started upward.

Rosin Output Down 30%

GUM rosin production in the United States for the 1932 season, April 1 to September 1, was only 460,555 barrels, a decline of 30 per cent from 1931. Stocks on hand as of September 1 also showed a drop to 379,893 barrels as compared with 454,271 a year ago. The upturn in the rosin market, in view of these figures, was naturally to be expected. Although there was a drop in wood rosin stocks as of the same date, production for the season was slightly higher by a few thousand barrels, but still well below the average of the past five years. In both gum and wood rosin circles, greater optimism prevails and the feeling is general that the low point of prices, ending a five year steady decline, was reached and passed in July and August.

In August, grade N gum rosin was priced at $4.65 a barrel and wood rosin was obtainable at $3.30 a barrel. Since that point, quotations on all grades have moved upward rather strongly, one of the causes of the upward trend being heavy buying of grades K, M and I gum rosin by the soap trade. A year ago there was a similar upward trend for a time in rosin prices, but the gains made were later wiped out as stocks continued to mount and consumption failed to gain. This year, the stage seems to be better set for an advance as the statistical position is much better. With production reduced, consumption showing signs of increasing, and stocks moving back to more normal figures, there is a much better chance for the present advance to be maintained than was the case a year ago. As a matter of fact if consumers, expecting higher prices, were to increase their inventories by only ten per cent, producers' stocks would once more be back at normal.

Another factor which depressed the market a year ago is less of a bearish influence now,—the rosin holdings of the Intermediate Credit Bank of Columbia, S. C. which a year ago amounted to some 300,000 barrels held as security for a $2,000,000 loan to the Gum Turpentine and Rosin Marketing Association. On the collapse of the latter organization a little over a year ago there was considerable excitement among rosin producers at the prospect of this large stock being unloaded on an already breaking market. The disposal of these stocks took place in an orderly manner, however, and it is now reported that the Bank's rosin stocks are only half what they were a year ago.

Over the past year the only large rosin consuming industry whose purchases have held up has been the soap industry. With sales to this trade still continuing large, and with the textile trade now more active, the prospect of an expansion in consumption is good. The paint and varnish industry may shortly be expected to expand its purchases also, as a million dollar advertising campaign to promote the sale of paint has recently been inaugurated by one of the large groups in this field. Meanwhile other commodity markets have moved sharply upward and general sentiment in all trades is improving. The combination of all these factors is believed by many followers of the rosin market to mark the end of falling prices and the beginning of the upturn. The immediate outlook is said to be moderately rising prices extending at least into the start of the 1932-1933 season. What turn the market will take at that point depends in great measure upon the output next season. If the marginal producers who dropped out this year again put their land in production next year, the rise in prices which eventually must come may be again postponed.

The wood rosin industry shows a somewhat different picture. Producers in this branch of the industry cut production a year sooner, and so avoided the depressing influence of the huge excess stocks which accumulated in the gum rosin market. Finding demand failing in 1930, the wood rosin industry adjusted its production schedule for 1931 to a point approximately 25% below 1930. The same production ratio has been maintained during

(*Turn to Page* 57)

Gum Rosin

Showing Production April 1 to Sept. 1 and Stocks as of Sept. 1 — years 1927-1932.

Year	Production	Stocks
1932	460,555 bbls.	379,893 bbls.
1931	675,934 "	454,271 "
1930	718,944 "	267,540 "
1929	746,110 "	205,595 "
1928	631,424 "	228,625 "
1927	765,913 "	200,669 "

Wood Rosin

Showing Production April 1 to Sept 1 and Stocks as of Sept. 1 — years 1927-1932.

Year	Production	Stocks
1932	153,862 bbls.	109,093 bbls.
1931	150,837 "	116,289 "
1930	202,179 "	114,281 "
1929	186,140 "	98,777 "
1928	181,560 "	114,074 "
1927	177,862 "	71,982 "

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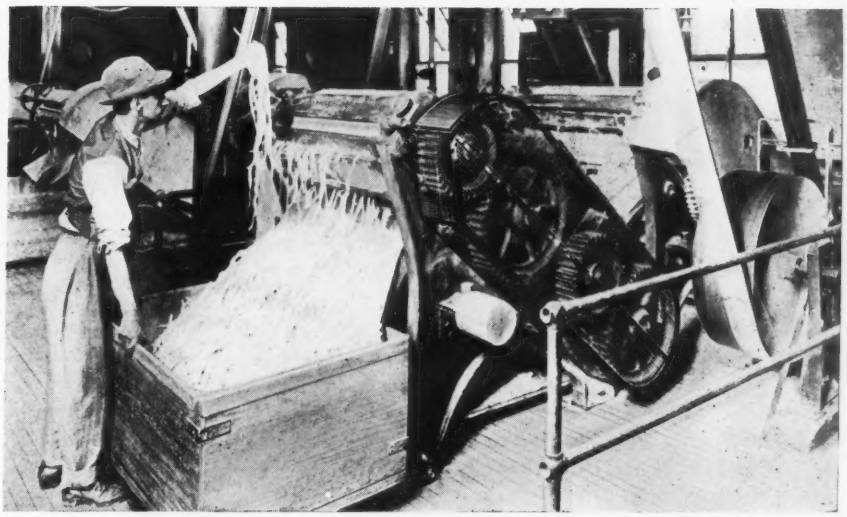
Production Units

Main Factory: GRASSE, FRANCE

L'ABADIE, France	VIGONE, Italy	BAMBAO, Comoro Is.
LE VIGNAL, France	AVOLA, Italy	SURABAYA, E. I.
PUBERCLAIRE, France	BOUFARIK, Algeria	LANGSON, Tonkin
BARREME, France	SOUSSE, Tunis	CHUNG-KING, China
LA ROQUE-ESCLAPON	ANTALAHA, Madagascar	TATSIENLU, China
RAHMANLARE, Bulgaria	SAINT-DENIS, Bourbon Is.	CAYENNE, Fr. Guiana
LES HESPERIDEES, Reggio, Italy		MESSINA, Sicily

Milled toilet soap or "French Process" soap is reputed to have been first made in the United States in the New York plant of David S. Brown & Co. in 1840.



American Soap Manufacture

A Brief History

PART II

By ROSCOE C. EDLUND
and IDA M. LYNN*

GREAT impetus was given to the soap industry by the centralization of the packing industry, which became the source of most of the tallow produced in this country. It was no longer necessary to depend upon the uncertain supply formerly available. Tallow was also being supplemented by other oils, the use of coconut oil dating from 1829.[20]

It is reported that in 1850 the increase was 81 per cent on the product of soap and candles,[21] and by 1860 the census figures recorded $6,347,138 invested in soap and candles in 614 factories, with the manufactured products valued at $18,464,575.

The discovery that fats can be hydrolized to fatty acids by heating with steam under pressure is attributed to R. A. Tilghman in 1853. The autoclave process is the result of his work.[22] A. Van Haagen, of Philadelphia, about 1862, originated the use of a solution of soda-ash as a hardening agent for soft soap,[23] and a Mr. Atkins of Brooklyn is said to have built the first soap press about 1864.[24]

In 1897 Dr. Ernest Twitchell contrived to boil fat with water and a small amount of "saponifier" thereby effecting its hydrolysis into fatty acids and glycerine. This process, now named after Twitchell, and the autoclave process above mentioned, make possible the recovery of glycerine before the materials are put into the soap kettle. By this means, cheaper grades of fats and oils can be used to good advantage.[25]

Soap was now being manufactured independently of candles, but "to manufacture it successfully," said one of the compilers of *Industrial America* in 1876, "requires much skill, for the materials are rarely of exactly the same qualities, the process cannot be reduced to the nice exactness of other chemical manipulations, there-

* Genl. Manager and Asst. Research Librarian respectively of Assn. of American Soap and Glycerine Producers, Inc.

[20] Lamborn, p. 4.
[21] Bishop, v. 2, p. 473.
[22] The Pulse, v. 2, No. 3, p. 5.
[23] Lamborn, p. 4.
[24] Stanislaus and Meerbott, p. 8.
[25] The Pulse, v. 2, No. 3, p. 5.

The powerful mechanical slabber is by gradual development the outgrowth of the original hand slabber which used a single strand of piano wire.

fore much depends upon the eye and the experience of those employed."[26]

Among the first known soap makers in this country, according to Stanislaus and Meerbott, were John Slidell and Company of 50 Broadway, N. Y., the establishment in which William Colgate learned the business,[27] but it was the three companies of Enoch Morgan's Sons, B. T. Babbitt and Company, and Colgate and Company which were recorded by Bolles (1879) as having "attained to a great reputation within the last fifteen years."[28]

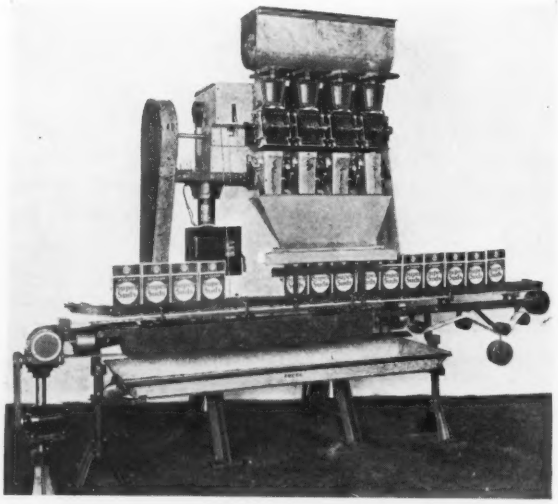
Enoch Morgan's Sons had already taken its place in the written history of soap making, for when Horace Greeley, Leon Case, and others undertook the compilation of a history of *The Great Industries of the United States*, in 1872, they visited the "old established firm" near the foot of Bank Street in New York, and followed the process "from the pan to the package" in order to give an adequate description of soap making to their readers.

Their report was sufficiently impressive for they found, filling the central part of the first floor of the factory, "a range of four or five immense iron structures called pans. These extend from the floor through the ceiling, and breast high into the room above. They are twelve or fifteen feet wide and of about the same depth, and will hold, if filled to the brim, about 100,000 lbs. each, or some eleven or twelve thousand gallons." He proceeded to describe the preparation of the lye, a solution of caustic soda in water, the "pasting" or "first union of the materials into a soap-like form," the successive boilings, the addition of resin powder to improve the yellow color and to make the soap more uniform in texture, and softer and easier of solution in water; the addition and running off of more caustic soda, the final treatment of the resulting mass of soap by water to eliminate the heavy impurities. As this mass settled, the soap appeared as a clear thick fluid with layers of spent lye, and so-called "nigger" or imperfect soap below it and a scum called the "fob," containing light impurities, floating on top. From the pans they saw the soap ladled into the frames, iron frames now, in place of the earlier wooden variety. When cool, the iron form was removed and the "great lump of soap" while still soft cut perpendicularly into bars, forming the "well-known 'bar soap'."[29]

The same compilers list a large number of fats and oils which were at that time used in making soaps, including tallow, suet, butter, spermaceti, whale oil, fish oil, goose-grease, horse fat, as well as a large number of vegetable oils.

B. T. Babbitt's soap works, on Washington Street, Nos. 64-84 and on West Street between Rector and Morris Streets, New York, were several times the subject of published accounts; one by the compilers of *Industrial America*, in 1876, and another when the company was included in a series of articles on American industries in the *Scientific American* in November, 1879. In the latter description, the firm is referred to as "the largest soap manufactory in this country, if not in the world." It occupied an area "equal to 23 city lots, 25x100 feet each," covered with brick buildings from three to five and eight stories in height, with a floor space of 300,000 square feet. From Mr. Babbitt's own machine shop at Whitesboro, N. Y., four boilers of his own invention, ranging from 60 horsepower to 500 horsepower, supplied steam to 25 engines placed wherever power was needed. Six "enormous cauldrons" were in use, the largest of which was 25 feet in diameter and 57 feet deep with a

[26] Industrial America, p. 429.
[27] Stanislaus and Meerbott, p. 7.
[28] Bolles, p. 528.
[29] The Great Industries of the United States, p. 677; p. 681.



The development of powders, chips and flakes brought automatic weighing and filling equipment. In the modern soap plant, few hand packaging operations remain.

capacity of 1,800,000 pounds at a single boiling. The six kettles had a combined capacity of 3,500,000 pounds. The writer was impressed by the "grand scale" upon which everything was carried out, and by the cleanliness everywhere observable. He declared that "notwithstanding the immense quantity of materials used in this establishment one cannot discover the slightest disagreeable odor."

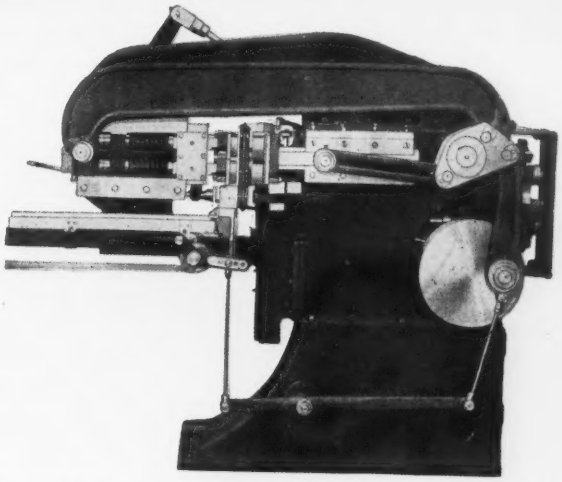
Toilet soaps were not neglected in the Babbitt Soap works. One of their specialties was a toilet soap entirely free from artificial odor for "frauds which have been perpetrated under the cover of perfumes by unprincipled manufacturers have created a distrust of the highly scented soaps, and made a demand for a wholesome soap free from such objections."

There was required annually, principally from Texas, 70,000 barrels of purest white tallow, and from the Carolinas 40,000 barrels of resin. "Immense quantities" of potash were imported from England, and vegetable oils and other raw materials were used in proportion. Soap production averaged about 1,500 boxes, containing 75 pounds each, upon which the imprint of "Babbitt's Best Soap" was stamped, and the annual sales were about 25,000,000 pounds. The apparatus was considered "unquestionably the most extensive and perfectly arranged that was ever erected either in this country or in Europe."[31] The employees, more than 200 in number, were provided with a dining room where meals were served at reduced rates.[32] It is said that Babbitt put on the market the first cushion-shaped pressed bar, and that in 1870 he received the first patents for the recovery of glycerine from waste soap lye.[33]

Colgate and Company, the third firm mentioned by Bolles, was at that time well established, having been founded in 1806. In 1845, William Colgate had built a pan in which could be boiled in a single batch 45,000 pounds of soap. This pan was then considered a curiosity, and by some a folly, but the growth of Mr. Colgate's business more than justified his innovation. He began modestly at 6 Dutch Street, New York, and at first was soap maker, buyer, salesman, bookkeeper and boss; but by 1847, the Dutch Street plant had been outgrown and the factory was moved to Jersey City, N. J., to provide for expansion.[34]

In the *New York Graphic* for Dec. 31, 1879, appeared a description of the plant of David S. Brown & Company which had been established on Peck Slip in 1808. In this factory seven soap kettles were then in use, holding from 80,000 to 100,000 pounds each. The "all-purpose" yellow bar was their main product as it was of all the soap manufacturers of that time, toilet soap being considered a luxury; but the author found the French milling process the "most entertaining of the whole business." The best quality of soap must be thoroughly cut

[31] Industrial America, p. 434.
[32] Scientific American, v. 41, No. 22, p. 340. Nov. 29, 1879.
[33] Lamborn, p. 4.
[34] McQuade.



From hand pressing and stamping of soaps, this modern soap press, handling toilet or laundry bar, one-ounce to sixteen ounces in weight, at a rate of 90 to 140 bars per minute, has developed.

and dried, then cut into shavings by a slicer, thrown into tin-lined boxes, perfumed and colored. It was then taken to the "mill," which in the author's words was "a machine composed of three large granite rollers, set in the form of a triangle, between which the shavings are passed so firmly that the colors and perfume are thoroughly impregnated. For the first time, the sheets as they pass from the rollers are spotted and uneven, but the operation is continued until perfection and evenness are secured, every particle being grooved as fine as the most delicate silk ribbon." It was then run through the plodder, a large cylinder with plungers which forced it through the opposite end into the desired shape "arranged for in the die therein. After skinning (laying on racks to form a coating) it is passed between dies for any desired imprint."[35]

NEW YORK, of course, was not the only place which was contributing to the growth of the soap industry. William Procter and James Gamble founded the business of Procter and Gamble in Cincinnati in 1837, and in 1878 their factory "consisted of rambling buildings between Canal and Central Avenue with a warehouse across the street to which stock was taken in hand trucks, some one going ahead with pieces of small timber to lay in the car tracks so that the trucks might cross them. Everything that went into the factory, including coal, and excepting only water, had to be hauled there and every shipment had to be hauled from the factory to a railroad depot or a steamboat landing." Before that time, very few soap makers had made use of trade names. Soap was soap, and usually yellow, and when Procter and Gamble made their first white soap the term "White Soap" was sufficient to distinguish it. The designation

[35] New York Graphic.

was finally considered not quite adequate, and in 1879 they sold the first cake under the name "Ivory Soap." In 1885 the company had outgrown its old quarters and ground was broken for a new plant at Ivorydale.[36]

As early as 1866 nine or ten flourishing soap factories were credited to Buffalo, N. Y., including Gowans & Beard, corner of Chicago and Perry Streets, and H. Thompson on the opposite corner of Perry and Miami Streets. It was estimated that "over $350,000 worth of soap and candles are manufactured in Buffalo, and that so successful has been the competition that New York soap and candles have been entirely crowded out of the market."[37] In 1875, the Larkin Company was started in a tiny building on Chicago Street in the same city.[38] Higgins and other western makers are mentioned by Bolles as being alert advertisers.[39] While New England was making some contribution to soap production, it was no longer the "stronghold" of the soap industry.

The capital invested in soap and candle manufacture in the United States more than doubled between 1860 and 1880. The following figures speak for themselves:[40]

	1860	1880
Number of establishments...	530	629
Capital invested	$6,350,000	$14,540,000
Value of production.....	$18,465,000	$26,555,000
Number of employees.....	3,247	5,289
Average annual wage per person	$330	$420

The next twenty years saw the industry making even greater progress.

While the LeBlanc process of making soda from salt contributed so largely to the building of a great industry, the process "involved certain technical and many unsanitary disadvantages, whose baneful effects proved a constant encouragement for the development of a simpler and more hygienic process." The United States never competed with England in the production of soda by the LeBlanc process, and it was not until after Ernest and Alfred Solvay found the way to make alkali by the so-called ammonia process, that the United States was able to furnish its own supply. In 1881, there was put into operation in Syracuse, N. Y., a plant for making soda by the Solvay process.[41] This was the beginning of American independence in regard to her soda supply, and cheaper and better soda made possible cheaper and better soap. Protected by import duties, American alkali manufacture increased with great rapidity. Later in Detroit, Mich., Akron, Ohio, Niagara Falls and elsewhere, caustic soda was manufactured by electrolytic processes.[42]

[36] Bosart.
[37] Manufacturing Interests of the City of Buffalo, p. 86.
[38] Fifty Golden Years.
[39] Bolles, p. 529.
[40] *Soap*, v. 7, No. 12, p. 23, Dec., 1931.
[41] Bosart, p. 8.
[42] Lamborn, p. 4.

Meanwhile much attention was being given to the improvement of mechanical equipment. Sheet steel made possible soap kettles which were both lighter and larger. Primitive hand methods had already been replaced to some extent by labor-saving and time-saving devices and machinery, stimulated by the introduction of steam as a driving force. The steam driven rotary pump replaced the bucket and dipper, and the mechanical mixer took the place of the hand crutch. As soap making establishments increased in size, there was need of more and better machinery. Boston, Buffalo, and Brooklyn at first contributed most of the soap making machinery. Constant improvements were made which affected the quantity, quality and appearance of the product. Trademarks became popular and the consumer was no longer expected to be content with a supply of yellow soap cut from a crude slab. Attractive shapes and wrappings became matters worthy of serious deliberation and considerable expense.

During the first quarter of the twentieth century the soap industry continued to expand, in spite of the fact that the number of individual companies decreased. The following figures, taken from the United States Department of Commerce Yearbook for 1931, tell an interesting story of fifteen years of progress:

	1914	1929
Value of product	$127,942,000	$303,377,000
Value added by manufacture	$39,075,000	$128,605,000
Number of wage earners...	14,172	14,050

SOAP production since 1909 has increased twice as fast as the population. Records reveal that in the decade 1909-1919, while the population was increasing 16.6 per cent, soap production as a whole increased 30 per cent. In the next decade, 1919-1929, while the population increased 15 per cent, soap production increased 36 per cent.

A true picture of the growth in the use of soap should take into consideration the exports and imports of this product. Exports are greater than imports, but by so small a margin (less than one pound per capita annually) that it does not materially affect the result. For all practical purposes, the amount of soap produced may be taken as an approximate measure of the amount of soap consumed.

There are several reasons for the growth in production during this period. Transportation facilities improved so greatly that national advertising and marketing became accepted principles of the business. Electric power and improved machinery made vast production possible under individual management. Management itself in the soap industry has been conspicuous for its alertness to every improvement both of manufacturing and of marketing.

The visitor who was impressed by the "grand scale" of the soap works of the '70s would find the modern soap factory fairly overwhelming. In the kettle room are to be found kettles constructed of riveted steel plates, with

cone-shaped bottoms, heated by steam coils drilled with small holes which allow the steam to escape in small jets having the double function of heating the material and agitating it. Inlet pipes are provided for water, lye, and raw materials. Each kettle may have a capacity of 350,000 pounds, equivalent to ten or twelve carloads of finished soap. Not one only, but rows of such kettles may be found in modern soap factories.

This is perhaps the most important and interesting department of a soap factory, for "the output of a soap factory can be intrinsically no better than the degree of merit it attains in the kettle room." The essential principles of soap making are practically unchanged from former times, but these have many refinements and improvements in processes, while the scale upon which large companies carry on their enterprise has been magnified many times over. But let us return to the kettle room.

"The 'stock,' as the fats are called, is run into the kettle and an alkali added, which causes the splitting of the fats into their component parts, and the combination of the fatty acids with the alkali. The resulting mixture rises to the top as soap, while the glycerine which remains, and any excess alkali, settle to the bottom. After a number of boilings, to extract as much glycerine as possible, the soap is allowed to cool from seven to twelve days."[43]

After the soap leaves the kettles, it passes through much the same process as of old, but the modern crutchers, plodders, milling machines, cutting machines, chipping machines, and wrapping machines are run by electric power, though as recently as 1914 it was said that "many establishments. . . have adhered to the time-honored steam drive, in belief that such operation was more economical than electric drive."[44] A cake of soap which comes from the frame sometimes weighs 1,000 or more pounds and may cut into 1,700 cakes of soap, or 15 or 20 boxes.

Soap factories no longer limit their products to yellow soap, or soap bars or cakes. In addition to laundry soaps and toilet soaps, they offer shaving soaps, soap chips, soap flakes, soap beads, medicated soaps, textile soaps, paste, powdered and liquid soaps, transparent soaps. and soaps in a wide variety of shapes and scents.

Contrary to earlier conditions "the processes are now chemically controlled at every point and raw materials are purchased on absolute conformance with specification." Nothing is left to guesswork. The United States has developed a great alkali industry, and the product now on the market is of high quality and reasonable price. Fats and oils, having to be drawn from all over the globe, are less uniform. But accurate knowledge of their chemical and physical properties makes it possible to utilize them in different combinations so as to take advantage of the best and cheapest materials available in the markets of the world. Large staffs of chemists are employed in many soap making establishments, some listing more than a hundred.

The region east of the Mississippi, not too far from the large packing houses and alkali factories, still contains many of the larger soap plants, although the Pacific coast is growing in prominence for its soap making establishments. Forty plants are now recorded in the West.

A SIGNIFICANT modern development is a co-operative effort by the entire industry to increase the total market in the United States for its products. Realization by the larger soap companies that there was a field for such joint effort led to the formation in 1927 of the Association of American Soap and Glycerine Producers. Its membership includes the firms making 80 per cent of the soap produced in the United States.

Under the Association, glycerine, an important by-product of soap which has a thousand uses, has come to be developed as an anti-freeze for automobile cooling systems. Markets for "radiator glycerine," and other uses for glycerine, are being developed cooperatively through the Association on behalf of the whole industry.

Educational work to increase cleanliness has been carried on in the name of Cleanliness Institute, by such means as posters, pamphlets, and other publications. The Institute serves schools, health agencies, industries, social service organizations, newspapers, magazines, and other forces for securing higher standards of cleanliness. A cooperative advertising campaign in magazines of national circulation has been one activity designed to interest more people in the practice of simple cleanliness, in more frequent bathing, handwashing, and changing of linen. Assistance to schools has been another major activity. This has included outlines for cleanliness teaching, publication of supplementary readers for various grades, and a wide variety of other effort in cooperation with educational authorities.

The relation of cleanliness to health is being increasingly recognized by leaders in community life. In view of the fact that 92 per cent of the deaths from communicable disease within the registration area of the United States are caused by organisms which enter or leave the body by the mouth or nose, health workers are paying more attention to the practice of such habits of personal cleanliness as washing the hands before eating. They are finding laboratory and statistical evidence that the importance which the early colonists, by faith, attached to cleanliness, is justified by science today.

The 27 pounds of soap available for use per capita by no means represent a sanitary Utopia, but only mark a way station on the road to it. This fact gives the soap industry a present security and a hopeful future. There is less evidence than in most other industries of fluctuation in production and consumption caused by untoward economic conditions. Employment conditions in the soap industry have been relatively stable during the depression period, due in part to careful plans by producers to hold their forces intact, in part to the steady

(*Turn to Page* 101)

[43] Scientific American, v. 119, p. 230. Sept. 21, 1918.

[44] Electrical Review & Western Electrician, v. 65, p. 851. Oct. 31, 1914.

MUNN

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Common Impurities in Raw Materials

The Dangers in Purchasing Off-Grade Caustic, Rosin, Salt, and Silicate Discussed by

PAUL I. SMITH

THE progressive soap manufacturer is ever anxious to improve important sales lines and often this anxiety becomes so acute that drastic and frequently ill-advised changes are made in working formulae, or closer scientific control of soap boiling is authorized. It is a cold and sorry fact, however, that very often the concerted efforts of manufacturer and chemist do not bring about the much desired improvements and they are at a loss to discover how to add that little extra something to their product.

In the opinion of the writer and indeed many authorities who have studied the subject, a considerable improvement of high grade soaps could be effected by using purer raw materials and exercising greater discrimination in their purchase. This is so simple and so economical a procedure that it is persistently ignored by many practical men in preference to costly and doubtful experiments. So-called commercial qualities of basic raw materials frequently contain small percentages of undesirable chemicals which have an adverse effect on soaps, especially those of finer quality. There is no doubt that once raw materials of the same high quality as used in the pharmaceutical industry are employed for soap manufacture, then a finer and better class product will be automatically obtained, assuming of course that working formulae are correct.

Caustic soda is naturally a key material in the production of toilet soaps. When purchasing this alkali, the question of purity and Na_2O content are points which are wisely stressed. The fact, however, is often overlooked that a 97% pure caustic soda with 76% Na_2O may still possess sufficient salt to lower the quality of cold made coconut oil soaps to an appreciable degree. Although no salt is used in the manufacture of these soaps, the sodium chloride from the caustic may creep in and act as a very undesirable filler. Apart from the inevitable lowering of quality, the presence of 1% or more of filler may lead a good customer to think he is buying adulterated goods.

The salt content of caustic soda varies considerably according to the method of manufacture, that is if made from salt by the usual chemical means or by the electrolytic process. Ing. J. Grosser-Koniggratz (*Seifensieder-Zeitung* Vol. 56, No. 19, 1929) examined an unfilled coconut oil soap and found .38% salt present. The caustic lye in the works was found to contain 2% salt. In another lye of 40.5° Bé. 33.9% NaOH was present, 0.73% Na_2CO_3 and 2.03% NaCl. It is apparent that this unsuspected source of common salt is liable to affect the composition of high grade pure transparent glycerine soaps, or indeed any which are specified by the manufacturer as containing no filler. It is a strange fact that very little attention has been paid to this source of contamination and one may search technical literature without coming across many important references. Schaal mentions it in his work, "*Modernen Toilette-Seifen-Fabrication*" but little real information is given.

Lye containing salt may be so treated that the latter is completely removed. The process is quite simple and consists of allowing the solution to settle for 48 hours or more at reduced temperatures. If a solution of caustic soda, 44° Bé, is run into large steel tanks situated in a cool place and preferably insulated with asbestos or wrapping of some kind and allowed to remain for two or three days, it will be found that a very large percentage of salt present is removed in the form of sediment. The time necessary for complete settlement depends largely upon the specific gravity of the lye and must be determined by experiment. It should not be a difficult matter to carry out a series of tests with lye at various specific gravities ranging from 42° Bé upwards and thus find out the most favorable. The essential points to remember are that perfect cooling of the freshly diluted lye is necessary before any settlement can take place. Secondly, the solution must have a specific gravity above 42° Bé., and thirdly, the fullest possible time is desired if optimum results are to be obtained. The practise of maintaining lye at increased temperatures so that saponification may start easier and boiling be quickened, is not to be recommended if any attempt is to be made to purify the liquor.

When purchasing caustic soda, either solid, flake, powder or liquid, for unfilled soaps, particular attention should be paid to the percentage of "sodium chloride"

present. In most cases the Na_2O figure can be taken for granted, but soluble mineral impurities are well worth checking.

THE purity of the salt used for graining by the soap maker is too often taken for granted. Sometimes it is true a rough test is carried out by the operator who determines the specific gravity of a saturated solution. If the hydrometer reads 26.00 Bé. for a 26.5% solution, then it is taken that the salt is pure. In works practice, a degree or so below the above reading is generally accepted. It has been shown that certain rock salts contain ferric oxide and sometimes the chloride in sufficient quantities to cause trouble during soap manufacture. The above impurities are liable to cause discoloration of quality soaps and also interfere with delicate perfumes. They are always potential dangers and should not be present in salt to be used for graining settled soaps or brine employed for strengthening charge.

The practical man may very easily carry out a rough test on a sample of salt to find out if iron is present. Soak a clean, fresh filter paper in the strong brine solution until saturated. While the paper is still moist, pour on a few drops of five per cent solution of potassium thiocyanate (sulfocyanide) and see if any discoloration takes place, if so, iron is present. In the latter case, the matter should be reported to a chemist and a representative sample of salt subjected to complete analysis.

Very often salt recovered from spent soap lyes in the glycerine recovery plant is not often as pure as is generally supposed. If sulfate of a lumina and sulfuric acid are used to purify the lye, there is danger of contamination of soap with colloidal aluminum hydroxide which passes through the average cloth with comparative ease. This metallic impurity forms an insoluble aluminum soap which may affect the lathering property of high quality toilet lines. Modern methods of purifying spent soap lyes now embrace the use of ferric chloride and hydrochloric acid. Unless the acidity and alkalinity of the lyes are accurately controlled by means of the electrolytic determination of pH, then there is danger of colloidal iron compounds being formed which will not be eliminated by filtering.

There is much to commend the modern method of using a salt drum and blowing the salt sludge into a hopper which feeds a centrifugal separator. Centrifugal action undoubtedly removes the bulk of objectionable impurities along with the valuable glycerine. Oscar H. Wurster in an article on "Crude Glycerine" in *Soap*, October, 1929, stated that such a procedure brings down the glycerine content of the recovered salt to about 0.25% and ensures a purer form of sodium chloride. Recovered salt does need analyzing from time to time to check purity and general suitability for soap making. It may be that the quality will allow it to be used only for common soaps.

THE quality of rosin used in the preparation of laundry bar soaps and many popular household lines play a great part in controlling appearance and appeal of finished product. Many commercial rosins contain objectionable impurities in the form of dirt and foreign materials which tend to lower the quality of an otherwise good soap. Then again, certain rosins cause soaps to develop a dark colored oxidation zone on the exterior after ageing. This means that bars so affected cannot command full prices owing to the apparent dropping of quality. A strong plea must be put forward for the utilization of highly refined paler rosins possessing a chemical composition closely akin to pure abietic acid. By the use of specially selective solvents in refining of wood rosins, it is now possible to decrease percentages of color bodies to a very considerable degree. It is perhaps unnecessary to point out that color bodies present in crude and commercial rosins are distinctly objectionable and undesirable from the soap making standpoint. The ideal wood rosin for high grade soaps is a WW or X color grade known as commercial abietic acid. Irvin W. Humphrey in his excellent paper, "Extraction of Terpene Chemicals From Waste Pine Wood" read before the Institution of Chemical Engineers on March 5th, 1931, in London, states that a WW or X color grade rosin "is practically free from the oxidized rosin acids occurring in the same color grades of gum rosin and satisfies requirements for abietic acid, except when the highest purity is requisite."

It is gratifying to state that two prominent American firms are now producing the paler grades of rosin from waste pine wood and specially suitable for the manufacture of soaps. These rosins are in fact paler than the present American Gum Standards and are absolutely free from all dirt etc., and are uniform in purity. These paler grades are of great interest to modern soap manufacturers as they contain the very minimum percentages of oxidized resin acids and high boiling oils and other organic ingredients which tend to color the rosin. Some of the latest paler grades of soap making rosins are only shades darker than the very pale sun bleached French grades so expensive at the present moment.

The soap manufacturer would be wise to pay more attention to the amount of color bodies in his rosin and a little less to the price. It is of course false economy to purchase cheap, dark rosins which will undoubtedly detract from the appearance of the soap when the paler grades may be bought for a little extra.

COMMERCIAL qualities of sodium silicate are sometimes adulterated with sodium chloride and other cheap mineral impurities. Ferric chloride, alumina and calcium hydrate have also been found in poorer grades of water glass utilized by "cheese-paring" manufacturers. The objections to iron salts in raw materials used in soap boiling have been clearly stated so that it is unnecessary to discuss the matter further. Alumina and lime are most undesirable chemicals to be present in the soap

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What is Dry Cleaning Soap?

IN explaining what a dry cleaning soap is and how it functions in the cleaning operation in petroleum distillate solution, Jack Gadd, president of the Riverside Manufacturing Co., St. Louis, brings out several interesting points in addresses which he has made before various dry cleaners' conventions. His latest address, which appeared in a recent issue of "Cleaning and Dyeing World," stated in part: "Any of the animal or vegetable fats or oils can be used to make dry cleaning soap, but oleic and stearic acids are in general use because dry cleaning soaps made from these fatty acids are more readily removable from the naphtha by treatment with caustic soda or other alkalis. The caustic alkalis used in manufacturing dry cleaning soaps are, particularly, potash and ammonia, as dry cleaning soaps made from these alkalis are more easily soluble in or mixable with gasoline or naphtha. Caustic Soda is not so adaptable in dry cleaning soap as it is the nature of this alkali to make a hard soap.

The particular difference between dry cleaning and water soap is that in water soap the fat is all combined with alkali, while in dry cleaning soap the fat is only partially saponified, the remainder being free; that is, in its natural state, not chemically combined with anything. The latter is known as superfatting and is the quality which makes it possible to dissolve the soap in a dry solvent; however, new chemical compounds have come into the market within the past few years which, as far as the dry cleaning soap industry is concerned, are known as coupling or emulsifying agents and they have made it possible to put completely saponified soap in perfect solution with petroleum naphtha and other dry solvents; furthermore, they have permitted a wide range of moisture content without upsetting solubility of the soap in dry solvents. Those coupling agents have found wide use in prespotting soap compounds where high moisture content is very desirable to obtain maximum effect on wet set spots and stains.

The time-honored paste type dry cleaning soaps which, when dissolved in naphtha, give the solvent a cloudy and silvery appearance, do not make a perfect solution, which is indicated by the fact that upon standing, a large part of the soap will settle out of its own accord. This is evidence that they are not adaptable in the filter system of cleaning as that part of the soap which is not in solution would be immediately removed by the filter, causing excessive filter pressure and the necessity of cleaning the filter too often. However, there is a definite advantage in this type of soap in that it is an excellent carrier of suspended particles of soil which have been removed from the garments being cleaned and this advantage in partially soluble paste type dry cleaning soap is demonstrated by its efficiency in the cleaning of white and pale colored woolens.

The paste or liquid, perfectly soluble dry cleaning soaps, which have come to be known as "filter soaps," are particularly adaptable for silks, in the strong soap system of cleaning in connection with a high pressure filter, for they are highly efficient in removing wet set spots and stains or reducing them to where subsequent spotting is easier, and when used in connection with a high pressure filter, the soap cost per garment is negligible as the soap solution is constantly kept clean by the filter and can be used for many loads before it is necessary to start over with a fresh solution.

In explaining the general nature of soap and the two distinct types of dry cleaning soap, I have said nothing about relative money values of dry cleaning soap. One cleaner was very persistent in his opinion that dry cleaning soap should be bought on anhydrous soap content; that is, on the actual percentage of dry soap in any product called soap. He very likely reached this conclusion from laundry experience, for laundry soaps are bought on this basis. However, laundry soaps cannot be used in dry cleaning for they do not dissolve in naphtha, and besides, do not function in the same manner as dry cleaning soaps, so this again raises the question as to "What is the difference, and how do they function?"

As previously indicated, water soaps are completely saponified and their primary action is to reduce surface tension of the water which obtains quicker and better penetration into the fabric being washed and then, through lubrication of the fibers and emulsification of soil with the suds, the soil is readily rinsed away. Gasoline, naphtha, carbon tetrachloride and trichlorethylene, which are now being used for dry cleaning, have practically no surface tension, so there is no need for dry cleaning soaps to reduce surface tension. Besides, these solvents will remove practically all greasy matter without the aid of soap. Furthermore, dry cleaning soaps do not suds to any extent that is of value in helping to carry away loose soil and if I can read your minds, you are now asking: "What good is dry cleaning soap anyway?"

A THEORY which was advanced some years ago as to the action of soap in naphtha is that the soap absorbs water and helps the naphtha to exert a greater solvent power on greases which may be in the garments and outside of this no one seems to have given any thought to the action of dry cleaning soap. It is my belief that dry cleaning soap is of some value as far

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as absorption of moisture is concerned, providing the garments contain more than their natural content of moisture. In view of this statement, it may seem illogical to say that water in dry cleaning soap is the most important ingredient, but this is reasonable when it is understood that water is mainly responsible for the extraordinary reduction in spotting on silks, since the general adoption of the strong soap system of cleaning and when it is also understood that dry cleaning soap can be made to take up additional water and function properly. This is a quality that should be in every dry cleaning soap. Dry cleaning soap also acts as a lubricant and carrier of loosened soil, so it is more easily rinsed away, and these two qualities are next in importance to its water action on spots and stains.

Finally, to the best of my knowledge all dry cleaning soaps contain some diluent, either naphtha or other solvent or material which has no value as far as cleaning results are concerned, but this is practically unavoidable, for otherwise it would be impossible or very difficult to dissolve the soap in naphtha. So questions which should be of interest to the purchaser of dry cleaning soap are whether or not it contains more diluent than necessary and what percentage of active ingredients it contains, for I am convinced that either one or the other is the only basis on which dry cleaning soap can be bought intelligently.

Even then a manufacturer would be telling the truth in claiming naphtha as an active ingredient, so in the final analysis, I see no rule or rules by which the dry cleaner can be sure of getting the most for his money in dry cleaning soap except through buying from reputable manufacturers and making thorough, practical tests as to merit.

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New Jamaica Coconut Oil Output

Recently, the Jamaica Coconut Growers' Association in the West Indies commenced the manufacture of refined oil under protective measures devised by the Government to render the industry safe from severe foreign competition. By the end of August, the association's factory had produced 1,500 cases of edible oil. The marketing of the product began in September, the retail price being fixed by a Government Board and approved by the Acting Governor in Privy Council at 7s.4d. ($1.76) per gallon. This decision is based upon the average prices at which refined oil imported into the colony is retailed in various centers. It is proposed that in addition to refined oil, the factory shall manufacture a lower grade of the product for the soap industry.

Under the law governing the cooperative association's operations the Government has set up a board with powers to regulate the importation of edible oil for local consumption. Official statistics show that upwards of 300,000 gallons of edible oil have been imported into Jamaica annually. The association's aim is to supply the entire requirements of the colony. Its factory has a capacity of 300,000 gallons per annum.

Denies Perfume-Rancidity Action

That the development of rancidity in toilet soaps is accelerated by the action of certain aromatic chemicals used in perfuming is stated to be erroneous by Dr. Eric C. Kunz, executive manager of Givaudan-Delawanna, Inc., New York. Dr. Kunz points out in a letter that a report from Germany based on certain Japanese experiments, which was published in the last issue of *Soap* fails to point out that the original work was based wholly on oxidation tests with linseed oil. He states that the results obtained cannot and should not be applied to soap rancidification as the types of reaction are entirely different. His letter states:

Editor, SOAP:

In your September issue, in the Production Section, there is an article entitled "Perfume As a Factor in Toilet Soap Rancidity." Your article mentions experiments made by Tanaka and M. Nakamura (Journal of the Society of Chemical Industry of Japan, 1932, number 2, page 81b), also an article by E. J. Better, (Chemiker Zeitung, 1932, pages 549 to 550). However, Mr. Better's article is based solely on experiments made by the Japanese chemists mentioned above.

Inasmuch as the article, according to our knowledge, pretends a certain amount of aromatic chemicals to be helpful or responsible for rancidity in soaps, we took occasion to go to the library and read the article published by the two Japanese chemists on which experiments your article as well as the German are based. Tanaka and Nakamura, to my great astonishment describe simply the influence of aromatic chemicals on the air oxidation of Linseed oil in the presence of light but, in no way draw any conclusions or comparisons between the air oxidation of Linseed oil (which is a drying oil) and the process of rancidity in fats and soaps.

The German article, based solely on experiments by the Japanese mentioned above, states the possibility of relation between the oxidation of soaps (rancidity) and the oxidation of linseed oil. Your article in turn goes one step further and takes it more or less as a fact that rancidity observed in soaps and the oxidation of linseed oil are about the same, without having the slightest experimental proof to offer.

The phenomenon of rancidity in soap and the phenomenon of linseed oil becoming semi-solid when exposed to air are both well known, and from a chemist's point of view, both reactions are of a rather complicated nature. Books have been written on both subjects.

Those familiar with the behavior of perfumes in toilet soaps know quite well that the very same aromatic chemicals which, according to Tanaka and Nakamura accelerate the air oxidation process of linseed oil, strongly inhibit that part of oxidation in soap which produces rancidity as in the case of geraniol, nerol, citronellol, terpineol, phenyl ethyl alcohol, benzophenone, benzoic acid, salicylic acid, etc.

We have reasons to believe that Tanaka and Nakamura are well aware of these facts and for this reason, in their article, did not commit themselves to the extent of making comparisons between the oxidation of a cake of soap and the drying process of linseed oil.

GIVAUDAN-DELAWANNA, INC.
Eric C. Kunz,
Executive Manager.

Sept. 26, 1932

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H. R. Swardson has been appointed sales representative for Wilson & Bennett Mfg. Co., steel container specialists, in the Cincinnati Territory. District offices will be at 49 Central Ave., the Cincinnati Terminal Warehouse Bldg. Telephone is Cherry 5588. A complete warehouse stock of steel shipping pails and drums will be maintained in Cincinnati.

Thomas Joins United Africa

Earl L. Thomas, formerly specialist in fats and oils of the Foodstuffs Division of the Department of Commerce, Washington, D. C., joined the staff of the United Africa Co., New York, on September 15 to be associated with D. T. Bloodgood in charge of the sale of vegetable oils. Mr. Thomas was associated with the Consolidated Rendering Co. at Boston from 1912 to 1928 as sales manager of the tallow division of that company. In 1928, he joined the Department of Commerce and was associated there until his recent change to the United Africa Co. He is a well-known authority on oil and fat production and marketing, and has been a regular contributor to the trade press on various phases of these subjects.

E. L. Thomas

—o—

Lower Prices Set on Whale Oil

A Norwegian whale oil producer is reported to have closed a sale with a large Continental consumer of whale oil at the price of £10 per long ton. The sale involved 23,000 tons of oil of the 1930-31 season and was No. 0/1 grade. The price obtained works out at slightly more than 1½c per pound at a rate of exchange of $3.47, the approximate average obtaining as of August 10-15. It is now estimated that the quantity of whale oil on hand and awaiting sale out of the catch of the past two seasons is approximately 562,000 barrels, the bulk of it being production of the 1930-31 season. News has been received from Trade Commissioner Carlson at Oslo, under date of August 18, that one of the Norwegian firms, which will operate on a limited production basis the forthcoming season, sold ahead 90,000 barrels of its anticipated catch at the price mentioned above.

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United States Printing & Lithograph Co., Cincinnati, has just completed a statistical study of the value of window display advertising as a sales medium, the facts being presented in a sixteen-page booklet entitled "Sales-Spot Advertising." The book emphasizes the value of window display as an advertising medium of major importance and gives considerable valuable data on circulation and comparative costs of consumer coverage. Copies may be obtained by addressing any office of U. S. Printing & Lithograph Co.

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Frank J. Lynch has been appointed chairman of the entertainment committee for the 1933 annual convention of the Associated Manufacturers of Toilet Articles. This is the third time that Mr. Lynch has served in this capacity.

SECURITY PRICES

PRICES of stocks of soap, chemical, insecticide, and allied companies as quoted on the New York Stock Exchange, Curb Exchange, other exchanges and over-the-counter are given in the following table. This table of prices is compiled monthly for *Soap* by a representative of one of the oldest and best-known brokerage houses in New York.

	High 1932	Low 1932	Sept. 1 1932	Oct. 1 1932
Allied Chem.	88¼	42½	82¼	81¾
Am. Agric. of Del..	15½	3½	13⅛	10¾
Amer. Cyan. "B"..	8½	1⅝	8½	5⅝
Armour of Ill. "A".	2¾	⅝	2¼	1⅞
Bon Ami "A"	54	31	45	50
Brillo	6⅝	4¼	4¼	6⅝
Colgate, P. P.	31½	11	17¾	15½
Consolidated Oil Co.	9	4	8	6¾
Corn Prod.	55⅜	24¾	47¼	54¼
Coty	7⅜	1½	4⅝	5
Dow Chem.	39	21½	34⅛	39
Drug, Inc.	57	23	45¾	39
Du Pont	59¾	22	39	43⅝
Glidden	10⅜	3⅛	7½	8
Gold Dust	20⅝	8¼	18⅛	19¼
Gulf Oil	44¾	23	39½	33
Int. Agric.	3½	¼	2⅛	1¼
Lehn & Fink	24¼	6	18	17
Mathieson	20⅞	9	19¼	18
McKess. & Rob. ...	6½	1⅛	4¾	5
Monsanto	30¾	13⅜	23⅞	26½
Proc. & Gam.	42¾	19⅞	32⅜	33¾
Shell Union	8¾	2½	6½	6⅞
Sher. Will	35	19⅜	25¼	26¾
S. O. of Cal.	31⅞	15⅛	28⅜	25⅞
S. O. of Ind.	25	13⅛	23⅞	21
S. O. of N. J.	37⅜	19⅞	34⅝	31
S. O. of Ohio	30⅛	15½	25¾	24¾
Swift & Co.	22	7	10	9⅛
Union Carb.	36⅜	15½	28⅜	29
Westvaco	12⅝	3	10	9⅝
Wilson & Co.	1¾	⅝	1¾	1⅛

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Easson's Soap, Inc., has been organized in Portland, Ore., with capitalization of $25,000, to manufacture and sell soaps.

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Hercules Powder Co. has recently put into effect two cooperative group insurance plans for employees, providing for life, accident and health insurance. Part of the premium is paid by the company.

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Royal Soap & Chemical Co., Los Angeles, has taken larger quarters at 5101 South Central Avenue.

CHICAGO TRADE NOTES

THE fifth and final golf tournament of the joint auxiliary of the Chicago Perfumery, Soap and Extract Association and the Chicago Drug and Chemical Association was held Tuesday, September 13th. Cooler weather diminished the attendance somewhat, but there was close competition, with the prize winners as follows: Class A: first prize, Elmer Smith, of American Aniline Products Co., with 88-7, net 81; second prize, H. G. Larson, of Hazel Atlas Glass Co., with 90-6, net 84; third prize, A. C. Drury, of A. C. Drury & Co., with 94-5, net 89. Class B: first prize, Harry Elwell, of Pennsylvania Oil Co., with 97-19, net 78; second prize, John Buslee, of Neumann-Buslee & Wolfe, Inc., with 105-25, net 80; third prize, A. J. Anderson, of Richard M. Krause, Inc., with 101-20, net 81. Class C: first prize, Frank T. Robinson, of Mansanto Chemical Works, with 127-31, net 96; second prize, M. V. Pennal, of Monsanto Chemical Works, with 143-33, net 110. Guest prizes were awarded to B. F. Zimmer, Jr., with 86-13, net 73; C. Bilfuss, with 88-14, net 74; and A. J. Dedrick, with 89-12, net 77.

The committee, headed by H. B. Elwell and A. C. Drury, who were assisted by G. M. Van Kirk and A. G. Schneider, thus brought to a close the second highly successful season of joint golf tournaments. Mr. Drury, at a time when it might be interpreted as a fitting reward for his efforts, joined that envied list of golfers who have made a hole in one. He accomplished it at the sixth hole of the Beverly Country Club course, over a distance of 187 yards. His total card for 18 holes was 79.

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With the encouraging start of an attendance of 24 at the opening meeting, the Perfumers' Association secured as a speaker for the second meeting, held at noon at the Hamilton Club on October 5th, Captain Gorby, who addressed the members on "High Spots of the Century of Progress." The Bowling Committee, consisting of Paul Pettit, Chairman, and Ray A. Morris, H. Schwenneke, A. J. Anderson and James Stock, held the first bowling meeting of the season on the evening of the same day, at the Elks Club. They plan to hold the first of the two annual tournaments late in November. The gatherings at the Elks Club will be weekly, at 7:30 p. m.

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At the first meeting of the Chicago Drug and Chemical Association on Thursday, September 29th, at the Hamilton Club, the membership was addressed by H. C. Wilson, of the Plymouth Motor Corporation. Mr. Wilson ran, in connection with his talk, a sound picture entitled, "Behind the Scenes" which showed graphically the engineering developments entering into the manufacture of Plymouth motor cars. F. K. Thayer, vice-chairman of the entertainment committee, promises a succession of speakers of equal interest for future meetings. The October meeting is scheduled for Thursday, the 27th and will also be at the Hamilton Club.

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The twelfth annual convention of the National Hairdressers & Cosmetologists Association, held on board the Great Lakes Steamer *Noronic*, proved as successful as it was novel. Sailing from Detroit on September 10th, the ship cruised until the 16th, stopping a day each at Toronto, Rochester, Buffalo, Erie and Cleveland, at all of which the local members of the trade visited in large numbers. Lectures and demonstrations were featured every day and the leading speakers were Louis Parme, Richard Klein, Agnes Schmitt, Max Hoefer, Marc Gartman, Margaret Condos, and Elizabeth Myers. A wide variety of products was exhibited and the special entertainment features provided every day included deck games, a masquerade ball, a mock trial and a grand ball.

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Mador, Inc., was recently established at 11 East Austin Avenue, Chicago, by E. C. King, A. B. Krick and E. J. Hockstad for the manufacture and distribution of drugs, chemicals and cosmetics.

—o—

Charles S. Dewey, vice-president of Colgate-Palmolive-Peet Co., returned from Europe early in September. While abroad, he had many interesting interviews with foreign financial leaders, which were, for the most part, decidedly encouraging.

—o—

Wharry Wins Oil Golf Cup

Oil Trades Association of New York held its annual championship golf tournament at the Pelham Country Club, Pelham Manor, N. Y., September 20. G. A. Wharry, G. A. Wharry & Co., New York, won the Bert Squier Cup given for the best low net score. Mr. Wharry was one of the tournament's low handicap players. Other winners, among the oil and fat contingent, included Ed Stern, Louis Stern Sons, tallows; Warren Monroe, Roesling Monroe & Co., brokers; Robert S. Hebert, T. G. Cooper & Co., Philadelphia, importers; and Karl Elder, New York traffic manager for Procter & Gamble. When it was discovered that three of the prize winners, Wharry, Hebert and Monroe, had played their championship round together there were rumblings and suggestions that their scores be thrown out, but "justice" finally prevailed. The oil traders enjoyed the hospitality of the club, one of the oldest and finest in Westchester, through the courtesy of their president, Clifford Weihman, Smith-Weihman Oil Co.

—o—

The first fall meeting of the New York section of the American Association of Textile Chemists and Colorists was held at the Chemists' Club, New York, September 23, with C. F. Chandler, E. I. du Pont de Nemours & Co., and D. H. Jackson, Croll-Reynolds Co., as speakers.

It's hard for a Hungry citizen to be a *Good* CITIZEN

THE boy whose stomach is empty cannot be expected to do good work at school. Babies undernourished through another winter may be handicapped by frail bodies through life. The hungry father of a hungry family is hardly the man to seek employment with persistence, or to do well on the job when he gets it.

Before you can save a man's soul it is often necessary to feed his body. You have no right to expect the civic virtues of patience, courage and honesty from starving, freezing men and women. If they preserve a just attitude towards the laws of the city in which they live, it is a miracle.

This winter, as never before, it is the duty of all who are well-clad, well-housed, and well-fed to help the less fortunate. The fact that you gave last year, and the year before, does not lessen your responsibility. The fact that you cannot afford a large contribution must not deter you.

The upturn of business with a gradual improvement of economic conditions does not remove the crisis of this moment. Emergency appropriations by the federal government amount to $300,000,000, but they meet only half the increased national needs for human relief.

The rest is up to you!

How will your dollars be used? First of all, they will feed the hungry, and relieve the absolute want of the unemployed.

They will be used, also, to take care of the sick and aged. They will help to maintain hospitals, orphanages and schools. They will make possible clinics and visiting nurses.

The dollars you give are invested in the forces of civilization right in your community!

WELFARE AND RELIEF MOBILIZATION, 1932

The Welfare and relief Mobilization for 1932 is a cooperative national program to reinforce local fund-raising for human welfare and relief needs. No national fund is being raised; each community is making provisions for its own people; each community will have full control of the money it obtains.

Give through your established welfare and relief organizations, through your community chest, or through your local emergency relief committee.

Newton D. Baker, Chairman, National Citizens' Committee

This winter, as never before, support your local Community Campaign

P & G Adopts Five-Day Week

Another leading American soap manufacturer has adopted the five-day week of forty-five hours. Procter & Gamble Co. announced early this month that all its American and Canadian plants would go on that basis. It will not apply to office workers at this time. The plan became effective Oct. 10. P & G have adopted the new employment basis, following its recent adoption by the Standard Oil Co. of N. J., the General Motors Corp., the New York Telephone Co. and other large organizations. It will not affect the P & G forty-eight week guaranteed employment plan.

In the soap industry, Lever Brothers Co. placed both their Hammond and Cambridge plants on a five-day basis early this year without any change in wage rate. Colgate-Palmolive-Peet Co. went to the five-day week on May 1 last. Other well-known soap manufacturers have also adopted the plan, and it is reported that this basis will shortly become universal in the industry.

—o—

Urge "Share-the-Work" Plan

The movement to spread out available work to include a greater number of workers with less work for each individual is gaining momentum under the leadership of Walter C. Teagle, president of the Standard Oil Co. of New Jersey, as the most definite and practical means of reducing unemployment and distress during the coming winter. Two communications on this subject have been sent out recently to the soap manufacturers of the country by Roscoe C. Edlund, manager of the Association of American Soap and Glycerine Producers. They state in part:

"The economic situation shows improvement in every respect but one—unemployment is increasing. Ten million men and women out of work, many of them half starved and desperate, constitute a danger that cannot be minimized. During the coming winter unemployment may threaten foundations never before disturbed in this country. Humanitarian talk and public and private charities will not solve the problem. The only way to stop unemployment is to put the unemployed back at work. Business confidence is returning but confidence alone cannot make more jobs. Until the actual amount of work to be done increases, there is only one way to use more workers. This is to spread the work among a larger number. Those who have work to spread must take the lead.

"Sharing the work" is no experiment. It has been tried successfully by many individual employers, large and small, including a number in the soap industry. Now the time is come when the general adoption of this plan is the most constructive step possible, both for employers and employees. The Share-the-Work Movement has just been organized on a national campaign basis by the banking and industrial committees of the twelve Federal Reserve banks. Within the next week or two your company may be asked to join this move-

(*Turn to Page* 103)

Edlund Heads Association Executives

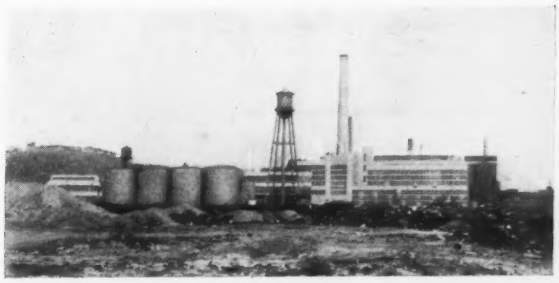
Roscoe C. Edlund, manager of the Association of American Soap and Glycerine Producers, Inc., New York, was elected president of the American Trade Association Executives at the annual meeting of that organization recently at Atlantic City. Mr. Edlund succeeds Warner S. Hays of Philadelphia as president. Mr. Edlund has been active in association and social service work for the past fifteen years, his connection with the soap and glycerine association dating back some six years to his organization work in conjunction with the late Sidney Colgate. He has also acted as director of Cleanliness Institute, a subsidiary organization of the Soap and Glycerine Producers. He has been active in industrial employment work in conjunction with the President's Emergency Committee on Unemployment. He aided in organizing the fight against a ten per cent luxury tax on toilet soap in the recent excise legislation in Washington. He is married and lives in Tuckahoe, N. Y.

R. C. Edlund

—o—

Lever Plant Nears Completion

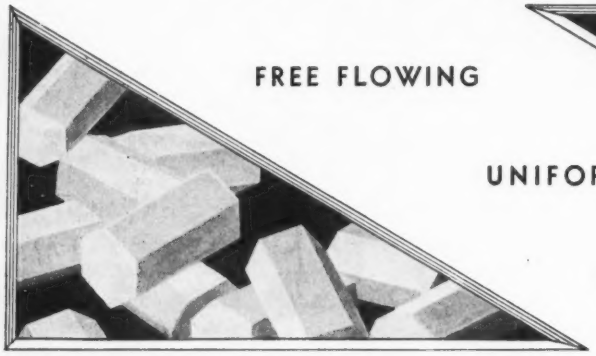
The new plant of the Lever Brothers Company for edible fatty products, located at Edgewater, N. J. across the Hudson River from upper New York City and in the shadow of the famous Palisades, is nearing completion.



The buildings are completed and large oil storage tanks are in place. Installation of equipment is understood to be progressing rapidly. In fact, some equipment is now in place and operating on the refining of vegetable oils for edible use. Production of the finished shortenings, cooking fats, and other edibles will not be under way for a couple of months or more, it is believed. Stone & Webster Co. of Boston, who handled the building of the Lever Brothers soap plant at Hammond, Ind., are also acting as construction engineers for the Edgewater edible products plant. Details regarding plans for the factory are not available from the company at this time.

SWANN T.S.P.

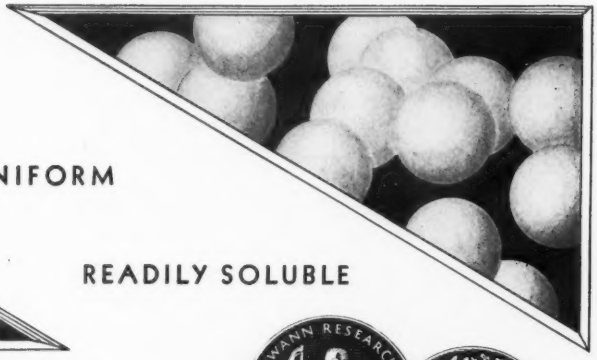
CRYSTALLINE OR GLOBULAR



FREE FLOWING

UNIFORM

READILY SOLUBLE



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Carbon Tetrachloride

in your liquid cleaners

STAUFFER BRAND Carbon Tetrachloride will make a good cleaner better. It is 99.9% pure, the purest obtainable anywhere, is water white and is absolutely free from residue or residual odor. May we work with you when you are next in the market? Let us submit samples and prices. Anything from a drum up.

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Los Angeles, Cal.

Office
420 Lexington Ave.
New York City

Say you saw it in SOAP!

PERSONAL AND IMPERSONAL

Newkirk-Armstrong Company, with headquarters at 1974 Franklin Street, Oakland, Calif., has started production of a new household soap under the brand name "GIT." In charge is C. C. Newkirk.

—o—

Martin Kaufman, sales manager of Ferd. Muelhens, Inc., New York, has been elected vice-president of the concern, succeeding William F. Kropff, resigned.

—o—

W. E. Smith, of the Chicago office of J. Walter Thompson Co., has been appointed advertising manager of Swift & Co., Chicago.

—o—

The U. S. Soap Company of Los Angeles made a definite move toward expanding its distribution northward in September, when crews of salesmen thoroughly "sampled" San Francisco homes with the company's "Golden State Hard Water Soap."

—o—

Edgar H. Kelley Co., manufacturer of toilet soaps, medicinal soaps and shampoos, formerly located at Woodmont, Conn., has taken new quarters on the Boston Post Road, Madison, Conn.

—o—

T. G. Cooper & Co., Philadelphia, advise that, based on cable information, they estimate the Spanish olive oil crop for the year 1932-33 at 440,000 tons of 2,000 lb. each. This compares with an average crop for the years 1926-27 to 1930-31 of 409,700 tons. It should be kept in mind that the effect of the olive fly, which usually attacks the fruit in the late fall, has not as yet been reckoned with, and that the crop maturity is now entering its critical period.

—o—

General Drug Company, 170 Varick St., N. Y., importers of aromatic chemicals, has printed a circular describing Citronal "S" for soap perfuming. The circular describes the general use of lemon odor in the soap industry and the specific use of the company's own product. Copies are available on request.

—o—

Southwestern Cacti Products Co., Benson, Ariz., has re-opened its soap plant where granulated and powdered soaps are manufactured from a base of vegetable oils and a certain species of cactus which is said to give the soaps unusual water softening properties. It is planned to expand the line to include bar laundry soap and washing powder and later toilet soap and shampoo.

Cudahy Packing Company is making alterations in its San Francisco plant at 55 Union Street to include new refrigeration equipment, new coolers, folding overhead wood doors, and similar improvements. Total cost will approximate $10,000.

—o—

United Africa Co., New York, leading American factors in palm oil and related products, has been appointed Eastern agents for the sale of soya bean oil manufactured by Soya Products, Inc., Chicago.

—o—

General Naval Stores Co., New York, has issued the following notice: "Public attention is directed to the fact that the process of treating rosin during the course of manufacture with any of the common water soluble alkalis is protected by U. S. Patent No. 1,787,281, issued December 30, 1930, to Robert C. Palmer, and now owned by the Newport Industries, Inc."

—o—

Heider Industrial Chemical Co., cleaners, Columbus, Ohio, has acquired larger quarters at 114 North Third street. The sales staff will be enlarged.

—o—

Bristol-Myers Co. has been experimenting over the past few months with a plan of offering coupons, redeemable in cash, with sales of "Ipana" toothpaste and "Ingram's" shaving cream to its retail distributors. One certificate is enclosed with each six packages of tooth paste and one with each six of shaving cream. Five shaving cream certificates and twenty-five toothpaste certificates are redeemable for $1.00, this amounting to about 2 per cent on the goods involved. The company reports that the plan has been favorably received and is working out without flaws.

—o—

The Palmolive Co., of Delaware, has petitioned the U. S. Supreme Court to issue a writ of certiorari and review the refusal of the lower courts—The Circuit Court of Appeals for the Seventh Circuit and District Court for the Western District of Wisconsin—to restrain the Wisconsin Tax Commission from collecting income taxes for 1924, 1925, and 1926, reassessed under a state statute that is declared to be unconstitutional and arbitrary.

—o—

Claude C. Hopkins, advertising agency executive who achieved considerable success in the advertising of "Liquozone" germicide and "Pepsodent" tooth paste, died September 21 at his home in Spring Lake, Mich. Mr. Hopkins is credited with being the originator of

the idea of including coupons in advertising space offering free samples of the advertised product.

—o—

Ralph Wechsler, treasurer of National Oil Products Co., Harrison, N. J., is at present in Europe visiting branch offices of the company in Germany, France and England. He expects to return late in November.

—o—

Carl F. G. Meyer, Meyer Bros. Drug Co., St. Louis, was elected president of the National Wholesale Druggists Association at the annual meeting at White Sulphur Springs which closed Sept. 22.

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Swift & Co., Chicago, have passed the usual quarterly dividend of 25c a share on common stock, payable October 1. Decision of the directors was based on a desire to preserve working capital.

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Soapak Sponge Corp., New York, is introducing a new bathroom sponge so designed that a cake of soap may be slipped inside a slot in the sponge when in use. It is of one piece construction and is sold under the name "Soapak."

—o—

James M. Hopkins and Melvin L. Emerich have been elected directors of Wilson & Co., Chicago, to fill vacancies caused by the deaths of Mark Cummings and C. I. Stralem.

—o—

Charles S. Dewey, vice-president of Colgate-Palmolive-Peet Co., returned to New York early in September after a visit to Europe. He reported that business abroad seems to be on the upgrade, much of the credit for the turn being given to recent financial and economic moves inaugurated by the United States Government.

—o—

Edward Plaut, president of Lehn & Fink, on his return September 23 from a four months' stay in Europe, reported that industry abroad is generally on a sound footing and that hard work is bringing France, Germany, Italy and England out of the economic slough. Of all the industries he studied abroad the French cosmetic industry was one of the two which showed the most signs of life, Mr. Plaut said. On his arrival he reaffirmed his confidence in the future of the American toilet goods industry, and stated that there would be no let-down in advertising by Lehn & Fink.

—o—

Squibb Athletic Association, made up of employes of E. R. Squibb & Son, Brooklyn, will hold an entertainment and dance on Friday evening, October 21, in the grand ballroom of the Hotel St. George, Brooklyn. Frank Zachmann is chairman of the committee on arrangements and S. F. Urban is chairman of the reception committee.

—o—

Antoine Chiris Co., New York, has recently issued a new catalog of prices on essential oils and perfuming specialties.

Perfume Importers Join A. M. T. A.

All members of the Perfume Importers' Association have become members of the Associated Manufacturers of Toilet Articles, completing the program laid out at the last meeting of the A. M. T. A. At a meeting of the executive board, September 22, the perfume importers were accorded representation on the excutive board of the A. M. T. A. by the election of Cecil Smith, managing director of Yardley & Co., as 2nd vice-president. J. F. Scanlan, general manager of Coty, Inc., and Ralph Aronson, vice-president of Bourjois, Inc., were elected members of the executive board. The cooperation of the importers and American manufacturers should be of assistance in regulating unfair trade practices and bringing the industry under strict control.

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Former Lever Chief Dies

John Gray, formerly vice-chairman of Lever Bros., Ltd., Port Sunlight, England, died at Colwyn Bay recently aged 69. Mr. Gray was a native of Dalkeith, he was educated in Edinburg, and became a chemist with Clippen's Oil Co., first at the firm's Johnstone works and later at its Midlothian works. He was appointed to the chemistry department of Lever Bros. in 1898, and four years later became general works manager. In 1906 Mr. Gray was appointed a managing director and in 1918 vice-chairman. In 1920 he relinquished that position to become managing director of the associated enterprises, Wm. Gossage & Sons, Widnes, and John Knight, Ltd., London. He retired in 1924, owing to poor health.

—o—

Set Lower Whale Oil Price

It is reported from London that a contract has been signed for 15,000 tons of whale oil at a price of £11 a ton for the coming season. The price is considered a low one, but it is believed that acceptance will be less costly for the whale oil company than to again tie up its whaling fleet, the annual carrying charges on which are £45,000. The resumption of whaling during the 1932-3 season depends also on disposal of part of the large existing stocks and a moratorium from noteholders. A British firm recently asked shareholders to declare a 2 year moratorium on sinking fund and interest payments which it has been unable to meet.

—o—

Sale of oleomargarine in Wisconsin has practically been wiped out as the result of drastic laws. A recent survey shows that in July, 1931, there were 4,136 retailers licensed to sell oleomargarine in the state and 84 wholesalers. Sale of oleomargarine at that time amounted to 6,500,000 lbs. per year.

On April 1, 1932, after the 6c lb. tax on oleomargarine went into effect, there were only 15 retailers. In the first quarter of 1932 only 10,975 lbs. of oleomargarine were sold in Wisconsin, and at the close of the first half of the year only 15,999 lbs. had been sold.

CONTRACTS AWARDED

Armour & Co., Chicago, has been awarded the contract for 4,000 lbs. leather equipment soap for Rock Island Arsenal, Ill., at a price of 3.95c lb.

—o—

S. Weinstein Supply Co., New York, has been awarded the contract for 3 cases Trilby soap at $2.24 and 20 bbls. soap powder at 1.934c for West Point cleaning supply department. Samuel Lewis Co., New York, awarded 1 keg sweeping compound at 2.25c. Noxon Chemical Products Co., Newark, awarded 24 lbs. floor wax at 13c and 6 gals. liquid floor wax at 70c. L. Sonneborn Sons, New York, awarded 1,312 lbs. floor wax at 9.9c. Cortes-Ward Co., New York, awarded 6 bbls. sweeping compound at 1.25c. Unity Sanitary Supply Co., New York, awarded 6 doz. tins hand soap at $2.25 and 5 cases scouring soap at $2.25. Heck Supply Co., New York, awarded 1 gal. liquid toilet soap at 90c. Stays Bright Products Co., Brooklyn, awarded 24 qts. metal polish at 15c, 4 gal. at 45c and 11 doz. pts. at 8.25c. Armour & Co., Chicago, awarded 6 cases chip soap at $2.90, 3 cases toilet soap at $2.40 and 3 cases laundry soap at $1.72. Wm. Barnett & Sons, Phila., awarded 48 cans powdered soap at 65c. Austin, Nichols & Co., Brooklyn, awarded 12 doz. pkgs. powdered soap at $1.24 and 16 doz. cans lye at 68.9c. American Soap & Washoline Co., Cohoes, N. Y., awarded 10 bbls. cleanser at 2.4c and 2 bbls. cleanser at 3.61c.

—o—

Among the successful bidders on various toilet preparations for supply to the Fort Sam Houston Quartermaster in a recent bidding were the following: Swift & Co., San Antonio, 4,400 pkgs. washing powder, 2.3c, 1,008 cakes toilet soap, 1.39c; 576 cakes, 1.458c; 144 cakes, 3.125c; BeVier & Co., New York, 24 sticks shaving soap, 23.5c; 240 tubes shaving soap, 24c; 960 tubes toothpaste, 15c; 300 cakes toilet soap, 6.5c; Caffarelli Bros., San Antonio, 900 cakes Ivory soap, 4.5c, 1,000 cakes soap, 4.514c; 240 tubes shaving soap, 21.7c; 360 tubes toothpaste, 31.5c; Lever Bros. Co. Cambridge, 6,600 cakes toilet soap, 6.24c; 96 tubes shaving soap, 19.1c; 1,200 cakes toilet soap, 5.4c; T. Miller & Son, New York, 2,088 cakes toilet soap, 6.5c; Uris Sales Corp., New York, 144 cakes shaving soap, 5.1c; Jas. Moore & Co., Laredo, Tex., 288 cakes toilet soap, 6.5c, 200 cakes, 4.95c; Western States Grocery Co., El Paso, Tex., 500 cakes toilet soap, 6.42c, 500 cakes, 4.65c; Morey Mercantile Co., Denver, 1,584 cakes toilet soap, 6.6c; Wheeler-Perry Co., Tucson, Ariz., 900 cakes toilet soap, 4.9c; T. M. Sayman Products Co., St. Louis, 576 cakes toilet soap, 6c; and Amer. Grocery Co., El Paso, Tex., 288 cakes toilet soap, 6.5c.

—o—

New Jersey Soap Co., Jersey City, N. J., has been incorporated by Matteo Ivaldi, Woodcliff, Bartholomew Bennett, Union City, and Grace O'Brien, Jersey City, to manufacture soaps and perfumes. Capitalization is $125,000.

—o—

Two new tooth pastes have been given endorsement by the A. D. A., these being "Zanol" tooth paste made by American Products Co., Cincinnati, and "Ephraim" dental cream made by Jerome W. Ephraim, Inc., New York.

—o—

National Oil Products Co., Harrison, N. J., announces the appointment of Edson K. Rice as sales manager of its textile oils department in the midwestern territory, with headquarters in Chicago.

—o—

Lever Brothers Co. will erect a three-story addition to its office building in Cambridge, Mass. The structure will be 81 by 31 feet, of brick, steel and concrete.

—o—

National Oil Products Co., Harrison, N. J., has changed the name of its new soapless shampoo to "Admiracion." It was formerly sold under the name "Euthol."

—o—

Dr. Ernest S. Guenther, chief research chemist of Fritzsche Bros., Inc., New York, returned to New York after his annual visit to the essential oil producing regions of France, Switzerland, Germany, Sicily, Italy, Dalmatia and Spain to follow it with an extended trip through the trade in the Middle West from which he has just returned.

—o—

Ralph G. Boalt, secretary of J. R. Watkins Co., Winona, Minn., accompanied by Mrs. Boalt, are at present on a world tour from which they will return about January 1. They sailed from the Pacific coast, their first stops being in Honolulu and Japan.

—o—

The plant of Atlan Soap Co., Jersey City, N. J., was damaged to the extent of approximately $5,000 in a recent fire.

Caustic Soda
High Grade—Solid or Liquid Form

Carbon Tetrachloride
Redistilled—water white—supplied also in combination with other solvents to meet individual requirements

Tri-Sodium Phosphate
Fine granular and powdered. Free-flowing and non-caking

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Palm Oil
Corn Oil
Peanut Oil
Grease (Animal)
Tallow
Red Oil
Soap Colors
Chlorophyll
Soda Ash
Sal Soda
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Caustic Potash
Carbonate Potash
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Caustic Soda
Silicate of Soda

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Write for Information and Samples.

WELCH, HOLME and CLARK CO., Inc.

563 Greenwich St. New York City

Established 1838

RECORD OF TRADE-MARKS

The following trade-marks were published in the September issues of the *Official Gazette of* the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

SWAT THE FLY—This in solid letters together with triangle on which appears the word "Stephens," describing insecticide. Filed by Solomon H. Stephens, Denver, June 30, 1932. Claims use since June 21, 1932.

SPEED BOY—This in solid letters with drawing of boy's head describing hand soaps. Filed by Speed Boy Soap Products Co., Moline, Ill., July 31, 1931. Claims use since Jan. 1, 1931.

I. EDWARD BROWN, INC.—This in solid letters describing metal polish and cleaning powder. Filed by I. Edward Brown, Inc., New York, Feb. 2, 1932. Claims use since Apr. 20, 1929.

BON AMI—This in solid letters on carton, with descriptive matter in Spanish, describing polishing and cleaning powder. Filed by Bon Ami Co., New York, May 6, 1932. Claims use since 1914.

SAFE-GARD—This in solid letters describing toilet soaps. Filed by Cincinnati Soap Co., Cincinnati, July 11, 1932. Claims use since January, 1932.

MIT-ZEE—This in outline letters describing washing and cleaning powder and hand soap. Filed by Mit-Zee Products Co., Lakewood, Ohio, July 13, 1932. Claims use since June 22, 1932.

SOAP-PERBA—This in outline letters describing granulated soap. Filed by Stockton Soap Works, Stockton, Calif., July 19, 1932. Claims use since June 1, 1932.

TERMALAC—This in broken letters describing cleaning powders. Filed by Milwaukee Lubricants Co., Milwaukee, July 29, 1932. Claims use since July 7, 1932.

BLACK MAGIC—This in solid letters together with jagged line describing shampoo. Filed by American Advertised Products, Inc., Chicago, July 28, 1932. Claims use since July 1, 1932.

"DEFIER"—This in solid letters describing soap cleaner. Filed by Meyer & Trudeau, Alexandria, Va., Mar. 4, 1932. Claims use since Mar. 1, 1932.

BLU-SUDS—This in solid letters on carton describing washing compounds. Filed by Blu-Suds Manufacturing Co., Detroit, Apr. 18, 1932. Claims use since Mar. 14, 1932.

COLONIAL CLUB—This in solid letters describing shaving cream. Filed by Nelson, Baker & Co., Detroit, June 20, 1932. Claims use since January 10, 1919.

TAR-O-LENE—This in solid letters describing insecticide and disinfectant. Filed by Bullen Chemical Co., Folcroft, Pa., Aug. 3, 1932. Claims use since July 11, 1909.

DESIGNED CARTON describing powdered soap. Filed by Lockwood Brackett Co., Boston, Sept. 15, 1930. Claims use since Apr. 6, 1926.

SABROL—This in solid letters describing tooth paste. Filed by Sabrol Laboratories, New York, July 1, 1932. Claims use since July, 1930.

ROTENOYD—This in solid letters describing derris extract. Filed by S. B. Penick & Co., New York, July 23, 1932. Claims use since July 1, 1931.

MOTHAFUME—This in solid letters describing moth proofing solution. Filed by S. B. Penick & Co., New York, July 23, 1932. Claims use since July 1, 1931.

CHACO—This in solid letters describing insecticides. Filed by Chase & Co., Sanford, Fla., July 28, 1932. Claims use since spring of 1927.

VOLENE—This in block letters on reverse plate describing antiseptic and germicide. Filed by Stephenson Mfg. Co., Springfield, Mass., July 28, 1932. Claims use since June 1, 1931.

—o—

Trade Marks Granted

297,145. Exterminators. Getz Exterminators, Inc., St. Louis. Filed January 2, 1932. Serial No. 322,635. Published June 14, 1932. Class 6.

297,154. Floor Scrubbing Soap. Creco Co., Long Island City. Filed August 29, 1931. Serial No. 318,549. Published June 21, 1932. Class 4.

297,182. Tooth Paste. Bon Ami Co., New York. Filed April 2, 1932. Serial No. 325,742. Published June 7, 1932. Class 6.

297,189. Insecticides. Levine Brothers, New York.

Filed April 7, 1932. Serial No. 325,874. Published June 7, 1932. Class 6.

297,190. Antiseptic Jelly. Durex Products Inc., New York. Filed April 6, 1932. Serial No. 325,840. Published June 7, 1932. Class 6.

297,191. Antiseptic Jelly. Durex Products Inc., New York. Filed April 6, 1932. Serial No. 325,839. Published June 7, 1932. Class 6.

297,192. Antiseptic Jelly. Durex Products, Inc., New York. Filed April 6, 1932. Serial No. 325,838. Published June 7, 1932. Class 6.

297,193. Antiseptic Jelly. Durex Products Inc., New York. Filed April 6, 1932. Serial No. 325,837. Published June 7, 1932. Class 6.

297,202. Shoe Polish. Jlco Laboratories, Chicago. Filed May 10, 1932. Serial No. 326,943. Published June 21, 1932. Class 4.

297,204. Toilet Soap. Colgate-Palmolive-Peet Co., Chicago. Filed May 6, 1932. Serial No. 326,842. Published June 21, 1932. Class 4.

297,206. Powdered Soap Compound. R. B. Martie, Inc., New York. Filed May 4, 1932. Serial No. 326,755. Published June 21, 1932. Class 4.

297,209. Shoe Cleaning and Polishing Compounds. Crystal Shoe Polish Mfg. Co., Chicago. Filed April 23, 1932. Serial No. 326,510. Published June 21, 1932. Class 4.

297,211. Metal Cleaners and Polishes. Supreme Products Co., St. Louis. Filed April 22, 1932. Serial No. 326,399. Published June 21, 1932. Class 4.

297,227. Insecticide. Klinzmoth Co., New York. Filed April 8, 1932. Serial No. 325,901. Published June 7, 1932. Class 6.

297,240. Cleaner for Linoleum. Gunn Furniture Co., Grand Rapids, Mich. Filed February 29, 1932. Serial No. 324,604. Published June 21, 1932. Class 4.

297,249. Metal Polish. N. S. Meyer, Inc., New York. Filed June 16, 1930. Serial No. 302,469. Published June 21, 1932. Class 4.

297,262. Cleaning Compounds. Alex C. Fergusson Co., Philadelphia. Filed March 18, 1932. Serial No. 325,255. Published June 21, 1932. Class 4.

297,312. Antiseptics and Disinfectants. Namm Store, Brooklyn. Filed April 20, 1932. Serial No. 326,296. Published June 21, 1932. Class 6.

297,318. Preparation for Cleansing Wounds. Robert McNeil, Philadelphia. Filed April 22, 1932. Serial No. 326,388. Published June 21, 1932. Class 6.

297,367. Antiseptic. Innovine Co., Fairhaven, Mass. Filed April 30, 1932. Serial No. 326,640. Published June 21, 1932. Class 6.

297,378. Insecticides. Lanair Co., Chicago. Filed April 2, 1932. Serial No. 325,754. Published June 21, 1932. Class 6.

297,379. Cleaner. Gilbert Products Co., St. Paul. Filed April 6, 1932. Serial No. 325,850. Published June 21, 1932. Class 6.

297,384. Floor and Furniture Wax and Polish. Best Products Co., Kansas City. Filed March 14, 1932. Serial No. 325,199. Published June 28, 1932. Class 16.

297,408. Liquid Floor Polish. Continental Car-Na-Var Corp., Brazil, Ind. Filed April 27, 1932. Serial No. 326,621. Published June 28, 1932. Class 16.

297,414. Floor Wax. Hillyard Chemical Co., St. Joseph, Mo. Filed February 26, 1932. Serial No. 324,514. Published July 5, 1932. Class 16.

297,423. Insecticides. Stenover, Inc., East Orange, N. J. Filed February 6, 1932. Serial No. 323,916. Published June 21, 1932. Class 6.

297,469. Disinfectant. Huntington Laboratories, Inc., Huntington, Ind. Filed May 16, 1932. Serial No. 327,153. Published June 21, 1932. Class 6.

297,543. Cleansing and Polishing Preparation. Norda Manufacturing Co., St. Louis. Filed March 19, 1932. Serial No. 325,285. Published July 5, 1932. Class 4.

297,544. Toilet Soap. Los Angeles Soap Co., Los Angeles. Filed April 7, 1932. Serial No. 325,875. Published July 5, 1932. Class 4.

297,545. Cleaning Compound. Twentieth Century Manufacturing Co., Cedar Rapids, Iowa. Filed April 5, 1932. Serial No. 325,834. Published June 28, 1932. Class 4.

297,566. Shoe and Stove Polish. J. L. Prescott Co., Passaic, N. J. Filed May 17, 1932. Serial No. 327,200. Published July 5, 1932. Class 4.

297,567. Soap. Red & White Corp., Buffalo. Filed May 26, 1932. Serial No. 327,475. Published July 5, 1932. Class 4.

297,581. Soaps. J. B. Williams Co., Glastonbury, Conn. Filed May 17, 1932. Serial No. 327,206. Published June 28, 1932. Class 4.

297,596. Floor Cleaner, Hand Cleanser, etc. West Disinfecting Co., Long Island City. Filed March 2, 1931. Serial No. 311,633. Published June 28, 1932. Class 4.

297,597. Soap. Colgate-Palmolive-Peet Co., Chicago. Filed February 27, 1931. Serial No. 311,512. Published April 14, 1931. Class 4.

297,613. Toilet Soap. Maison Jeurelle, Inc., Jersey City. Filed May 10, 1932. Serial No. 326,945. Published June 28, 1932. Class 4.

297,614. Shoe Polish. Louis B. Kunkel, St. Louis. Filed April 28, 1932. Serial No. 326,592. Published July 5, 1932. Class 4.

297,615. Metal Polish. L. K. Rhodes, Little Rock, Ark. Filed May 7, 1932. Serial No. 326,873. Published July 5, 1932. Class 4.

297,636. Automobile Cleaner and Polish. Best Products Co., Kansas City. Filed March 14, 1932. Serial No. 325,198. Published June 7, 1932. Class 16.

297,650. Soap. Crystal Chemical Co., Belleville, N. J. Filed March 14, 1930. Serial No. 297,297. Published July 5, 1932. Class 4.

Develop New Water Still

A new one gallon automatic water still has been developed by F. J. Stokes Machine Co., Philadelphia. The new piece of equipment, illustrated below, completes the Stokes' line of water stills, the largest stock

machine having a capacity of 100 gallons per hour. The larger equipment is of particular interest to liquid soap manufacturers and converters. Pyrex covers permit observation of operation and make for easy cleaning. A special device keeps concentration of impurities in the boiling chamber at a minimum, thus, reducing foaming and scale formation, of interest where only hard water is available. Three models are offered—steam, gas and electric. The stills are finished in black "crackle" and chromium plate. They are constructed of heavy copper, solid block tin and pyrex. Wall bracket and floor stand types are available. A folder describing the new still is available on request to the company at Tabor Road, Philadelphia.

—o—

A new firm in San Francisco engaged in the manufacture of veneer drums, kegs and barrels for use as containers of soap, chemicals and dyestuffs, is the Acme Plywood Container Company. Headquarters are at 420 Fulton Street, where A. E. Elder is manager.

—o—

Stanley Doggett, Inc., New York dealer in chemicals and colors, announces the opening of a branch office in Cleveland in charge of Clayton F. Braund. Quarters have been taken in the Schofield building, 2016 East 9th Street.

New Patents

Conducted by
Lancaster, Allwine & Rommel
Registered Attorneys
PATENT AND TRADE-MARK CAUSES
815 15th St., N. W., Washington, D. C.

Complete copies of any patents or trade-mark registrations reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 1,869,406, Preparation Of New Mouth Washes and Dentifrices, Patented August 2, 1932, by Friedrich Braunlich, Aussig A/E, Czechoslovakia, assignor to Society of Chemical Industry in Basel, Basel, Switzerland. A dentrifice having as an ingredient a salt of a sulfonated castor oil soluble in water.

—o—

No. 1,870,123, Embalming Fluid, Patented August 2, 1932, by Hilton Ira Jones, Wilmette, Ill., assignor of one-half to Paul H. Buchanan trustee for The National Selected Morticians of Washington, D. C., a Corporation. An embalming fluid comprising an alkaline soap solution and a sodium salt of the type of sodium orthophenylphenate.

—o—

No. 1,870,311, Cleanser for Aluminum, Patented August 9, 1932, by Wilmer Charles Gangloff, Cincinnati, Ohio, assignor to The Drackett Chemical Company, Cincinnati, Ohio. An aluminum cleanser comprising the following ingredients in substantially the following proportions:—

	Per Cent
Powdered pumice	25
Powdered SiO_2 (calcined)	25
Sesqui-carbonate of soda	25
Trisodium phosphate	10
Powdered soap	10
Ammonium chloride	5

—o—

No. 1,870,804, Detergent and Water Softening Product, Patented August 9, 1932, by William A. Gale and Charles F. Ritchie, Trona, Calif., assignors by mesne assignments, to American Potash & Chemical Corporation, New York, N. Y. A crystalline water softening and detergent product containing a double salt of trisodium phosphate and sodium metaborate, and another alkali metal salt of a weak acid.

—o—

No. 1,873,383, Detergent Composition, Patented August 23, 1932, by Albert G. Glover, Brookline Mass. A stable, non-corrosive detergent composition miscible with water, the composition comprising more than

(*Turn to Page* 47)

Terpineol, C. P.

Water White—Fine Odor—One of the Best
Low Cost Odors for Soaps, Fly Sprays,
Deodorizing Blocks, etc.

Menthol Crystals

Synthetic

White Crystals with Fine Natural Odor for
mentholated shaving creams, soaps,
shampoos, lotions, creams

Thymol U.S.P.
Prime White Crystals

Camphor
Synthetic

Products of SCHERING-KAHLBAUM, A. G., Berlin

SHERKA CHEMICAL CO., INC.

New Address: 75 WEST STREET, NEW YORK, N. Y.
Telephone: BOwling Green—9-7482

Sole Importers for the U. S. A.

GERANIOL for SOAP

In various grades to meet every requirement as to price

A. M. TODD COMPANY

KALAMAZOO, MICH.

Business established in 1869

Market Report on

ESSENTIAL OILS AND AROMATICS

(*As of October* 8, 1932)

NEW YORK.—Mixed price movements were the rule in the essential oil and aromatic chemical market this period, with a number of price advances and about an equal number of lower prices appearing. On the whole, however, the tone was decidedly better, consumers showing more interest in the spot market and sales picking up moderately. Such declines as were made were orderly and made on the initiative of sellers. Anise and cassia oils continued in weak position as producers were forced to make concessions to secure buyers. Cananga, on the other hand, was decidedly firmer, with spot stocks about exhausted and no prospect of new oil until after the first of the year. Higher cables came in on citronella, Ceylon, but Java oil was not affected. Bois de rose oil was firmer, due to a shortage of stocks, while otto of rose was reduced by some sellers.

Oil Anise

No change was reported in the price of oil anise which continues to hold at the low point of recent months. The expected advance has as yet failed to materialize due to the apathy of buyers. Producers are able to attract interest only by making concessions from the present market level.

Oil Bois de Rose

A shortage of stocks, both on spot and in producing areas, was responsible for a moderate advance in the price of this oil last period. The inside quotation is now $1.90 on cayenne oil.

Oil Cananga

For the present, quotations on cananga are little more than nominal, as little oil is available on spot and none is offered for shipment until after the first of the year. Rectified oil has not been affected.

Oil Cassia

Three more cents were cut off the price of cassia oil this period, as the result of additional concessions by Chinese producers anxious to move stocks. The drum price is now 84c pound.

Oil Citronella

Late cables report a rather substantial advance in the price of Ceylon oil, which is now quoted on spot at 35c pound in drums, three cents above the level of last month. As yet no definite background for the advance has been determined. The spot price of Java oil is as yet unchanged.

Oil Geranium

Geranium prices have eased off moderately over the past month, with consumers showing little interest in the market and apparently waiting for possible lower prices later in the year. African is quoted at $4.20, inside, and Bourbon at $4.30.

Oil Peppermint

This oil continuous to be one of the strong features of the market. Prices have held steady at previously quoted levels.

Oil Sassafras

A general reduction was made in the price of sassafras, artificial, by principal producers early this period, bringing the market down to a basis of 19c to 21c pound. Other derivatives such as camphor oil, sassafrassy, and safrol have also been reduced as a result of the lower raw material costs.

Otto of Rose

A number of sellers recently announced a further reduction in the price of natural oil, bringing the inside figure down to $6.50 an ounce.

—o—

Australian sandalwood oil has been added in the new British Pharmacopoeia and is now official for medicinal use throughout the British Empire. It has been official in the French Pharmacopoeia for some time. The Australian oil is not official in the U. S. P. and cannot be imported into the United States for medicinal purposes, but it is understood that it is under consideration for inclusion in the next pharmacopoeia.

—o—

Representatives of a number of leading manufacturers of packaging machinery met at Buckwood Inn, Delaware Water Gap, Pa., October 6 and 7 to discuss plans for the formation of a packaging machinery association.

—o—

New Patents

(*From Page* 45)

50 per cent of a hydrocarbon chlorid admixed with other materials, the other materials comprising sulfonated vegetable oil, soap, water and a small amount of an alkali carbonate of the class consisting of sodium and potassium carbonates, the alkali carbonate being dissolved therein and being present in amount sufficient to render and maintain the composition alkaline with carbonate alkalinity.

If you are interested in preparing a *better* Latherless Shaving Cream at a low cost use

Contra-Foam

(A Pylam Product)

Contra-Foam makes a *better* Latherless Shaving Cream — positively neutral and non-irritating.

Better, since Contra-Foam creams require no preparatory facial wetting, nor removal with water after shaving. Moreover, they are genuinely soothing and extremely beneficial to tender or dry skins.

Write now for a sample of Contra-Foam and the simple formula for the production of Latherless Shaving Creams.

Pylam Products Co., Inc.

Mfg. Chemists Exporters Importers

799 Greenwich St., New York, N. Y.

Cable Address "Pylamco"

Soap Color Makers Since 1917

for YOUR PRIVATE LABEL

SPECIAL CLEANSERS

Our list includes the most efficient cleanser compounded for your particular trade.

SUPER ALKALIES

These are products which are adapted for special uses where stronger alkalies are required.

SNOWFLAKE CRYSTALS

The accepted base for quality bath crystals.

SCOURING COMPOUND

An effective abrasive product for cleaning floors, marble, etc.

PARADICHLOROBENZENE

This exceptionally pure product is an excellent deodorant and moth preventive.

ORTHODICHLOROBENZENE

For insecticide sprays and metal polishes.

PUT Solvay quality into your packages and get more out of your private brand. Write for Booklet SC7 for particulars on products for your special trade.

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

61 BROADWAY NEW YORK

SOLVAY PRODUCTS

Market Report on

SOAP AND DISINFECTANT CHEMICALS

(*As of October* 10, 1932)

NEW YORK—The market for soap and disinfectant chemicals continued to exhibit a decidedly firmer tone this period, prices holding steady or advancing, excess stocks being reduced and movement of material into consumers' hands being accelerated. The soap industry drew out considerable quantities of caustic potash last period, and movement of other alkalis also held up well. The price of soaps lye glycerin was bid up during the period, largely as the result of demand by one of the large refining interest. Rosin quotations continued to advance, as shipments from southern ports increased and stocks continued to recede.

Alkalis

An increased call for caustic potash by the soap industry was noted this period, and normal withdrawals of soda ash and caustic soda were reported. With the approach of the contracting season consumers were beginning to speculate on the possible 1933 schedule, although as yet no information has been forthcoming as to prices.

Glycerin

Substantial demand for soaps lye glycerin by a large refining interest caused an advance in the price of this grade of glycerin during the period just closed, the price being bid up to a basis of 4½c to 4¾c pound. As yet no support has been found for a higher price on chemically pure glycerin. With the approach of the anti-freeze season, glycerin marketers are looking for an expansion in sales to this trade. It is understood that glycerin-base anti-freeze preparations will be made available to car operators at a lower cost this year, while it is expected that alcohol will not be available as cheaply as it was a year ago. Imports of crude glycerin into United States during August, 1932, totaled 23,179 lbs., worth $453, while imports of refined glycerin were 272,695 lbs., valued at $14,231.

Insect Powder

Quotations on good grade pyrethrum flowers continue to hold at 18c to 20c pound. In spite of the drop in Japanese exchange over the past month pyrethrum prices have been unaffected. Reports from producing areas are to the effect that the size of the Japanese crop has been overestimated, and the new supply will not be as large as anticipated. New crop material is held in strong hands in the Japanese market, and importers are of the opinion that little may be looked for in the way of price concessions.

Naval Stores

Another moderate advance in rosin prices was scored this period, gains ranging from 5c to 25c per barrel on various grades. Arrivals continue light, and with the substantial withdrawals which have taken place in recent weeks, stocks are much smaller than they were a year ago. Closing quotations were as follows: Gum Rosin, Grade B, $3.65; H, $4.05; K, $4.62; N, $5.25; WG, $5.80; WW, $6.70; Wood, $3.63 to $3.83.

—o—

Hercules Offers New Pale Rosins

The production of new wood rosins of the grades M and N has been announced by the naval stores department of Hercules Powder Company. The new rosins are unbleached and experiment has shown, it is stated, that they will bleach with heat into the paler shades. The general specifications, other than color, of the new M and N wood rosins are very close to those of Hercules I wood rosin. A new process developed at the company's Brunswick, Georgia, plant makes possible the production of a complete line of wood rosin grades which will extend, upon bleaching, into the palest grades now in demand, it is stated by Hercules authorities.

—o—

Anchor Cap & Closure Corp., L. I. City, N. Y., has issued a folder entitled "Double Duty Packages" in which it is pointed out that the container may be made to serve many purposes besides merely carrying the product. The folder discusses the use of the package as a sales and advertising medium and also points out the possibilities of packages which make the products contained easier to use and containers which have a further use after the product is consumed.

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The fall outing of American Cyanamid & Chemical Corp. and subsidiaries was held at Briarcliff Lodge, Briarcliff, N. Y., October 12, the day being devoted to golf, tennis, baseball, field and obstacle races, horseshoe pitching and aquatic events.

—o—

Everett F. King, Lever Brothers Co., was among the delegates to the annual National Safety Council which opened in Washington, October 3.

—o—

Nassour Bros., Inc., Los Angeles, olive oil soaps, have opened a branch warehouse in Chicago.

—o—

Mayonnaise Manufacturers' Association meets in the Hotel Kenmore, Boston, October 24-26.

FIRST CHOICE of SOAP MAKERS..

P. Q. SILICATES OF SODA have been chosen for their economy in years of plenty as well as in years of thrift.

Time was when soap makers were interested in silicate only because it was cheaper than soap. From 1825 the value of silicates of soda as detergents has been demonstrated until now we know that even with low priced fats, mixtures of soap and silicate give more and better cleaning service than pure soap.

Down through the years of soap history "N" Brand Silicate, a P. Q. product, has been specified in each generation's formulae.

The Soap Industry is served from eight plants:

Anderson, Ind.	Kansas City, Kans.
Baltimore, Md.	Rahway, N. J.
Chester, Pa.	St. Louis, Mo.
Gardenville, N. Y.	Utica, Ill.

PHILADELPHIA QUARTZ CO.
ESTABLISHED 1831

General Offices and Laboratory
121 S. THIRD ST., PHILADELPHIA
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RED OIL

TALLOWS

Controlled Production:—

We collect, render and refine all of the raw materials used in our stearic acid and red oil. This close control, not available in any other brand, insures high quality products by eliminating low grade raw materials. Let us submit samples and prices. There is no substitute for quality. Use them in your

Dry Cleaning Soaps
Shaving Soaps
Special Cleaners
Polishes
Liquid Soaps

FANCY - EXTRA and SPECIAL TALLOW
Fatty Acids

Theobald Animal By-Products Refinery

KEARNY, N. J.
ESTABLISHED 1914

Market Report on

TALLOW, GREASES AND OILS

(*As of October* 10, 1932)

NEW York—Mixed price movements were the rule in the oil and fat market last period, with a number of oils making fractional gains, while those of chief interest to soapmakers showed rather sharp losses. Buying was stagnant during September, as buyers showed little tendency to rush into the market after the sharp advances of the last three months. Weakness in security and other commodity markets acted as a bearish factor, giving buyers the idea that a postponement of buying might let them secure stocks later on at something near the low prices of May and June. The oil which showed the sharpest decline during the period was cottonseed, which always moves in sympathy with developments on the commodity and security exchanges. Coconut oil and tallow also declined in price, each being off about a half cent a pound from the recent highs. Fractional advances were registered in a number of oils including linseed, lard, palm, peanut, soyabean and tallow oils.

Coconut Oil

The market for Manila oil eased off approximately a quarter of a cent a pound this period, bringing New York tanks down to 3½c, as compared with the recent high of 4c lb. This was considered a corrective movement to remedy the top-heavy condition of the market caused by the recent advance which most traders thought came too abruptly. The market was quiet, with consumers showing little activity.

Corn Oil

In spite of falling grain prices this period the price of corn oil was only fractionally lower, as offerings continued light. There was little interest on the part of buyers, however, and sales have been few at the higher levels current over the past six weeks.

Cottonseed Oil

Crude and refined cottonseed oil dropped sharply in price this period, each being quoted almost a cent a pound lower at the close of the period, crude at 3¼c lb., and p.s.y. at 4⅛c lb. There was little speculative interest on the bullish side of the market this period, as operators curtailed operations due to the general and sharp decline in the prices of other commodities and securities. Another bearish factor was the government cotton crop report which anticipated a somewhat larger crop than had been unofficially forecasted.

Tallow

Tallow, like coconut oil, was priced lower this period, being quoted as low as 3½c lb., which is about a half-cent under the top figure for the recent advance. Inactivity of buyers was partially responsible for the drop, the opinion being that prices had advanced too abruptly and that a corrective reaction was in order.

—o—

Estimate 1932-33 Whale Oil Catch

The greater part of the unsold production of whale oil from the 1930-31 season, amounting to about 900,000 barrels, or 150,000 tons, has been held by a sales pool, which during the last 12 or 15 months has disposed of such quantities as to leave unsold about 250,000 barrels equalling 42,000 tons on Sept. 1. Of the quantities disposed of, the Unilever combine has taken about 23,500 tons, and other European buyers, including Russia, about 84,000 tons.

The new season begins October 20, that is, about six weeks later than the 1930-31 season. Only one sale of prospective catches has been reported so far, this amounting to 16,000 tons. The quota agreement entered into by all Norwegian and foreign whaling companies operating in the Antarctic, except the Unilever Co., according to which production will be limited to the mean figure between the production of 1930-31 and the carrying capacity of all the factories, less a reduction of 38 per cent. Under the quota, the estimated production for the coming season will be about 1,800,000 barrels, or some 300,000 tons.

The estimated complement of ships will be 18 or 19 floating factories, of which 10 or 11 will fly the Norwegian flag. The estimated number of shooting steamers will be 115 to 120, and the crew will number about 5,000 men, which is about one-half the number employed during the 1930-31 season.

—o—

The annual banquet of the Oil Trades Association of New York is to be held in the Waldorf-Astoria Hotel, New York, October 18. Reservations may be made through Albert J. Squier, chairman of the entertainment committee or Joseph C. Smith, secretary of the association. The affair will be conducted along its usual lines, dinner being followed by a floor show and an informal evening of amusement.

—o—

Harry M. Roberts, in charge of sales in the Cincinnati territory for Brooks Oil Co., Cleveland, died of a heart attack while on a train between Columbus and Cleveland, October 3.

SOAP PERFUMES

We offer you a full line of high class soap perfumes at reasonable cost, all of them having outstanding odor value. We invite you to ask us for samples, and to try them out in a proportion of 1 : 100. You will be amazed at the results obtained.

CHYPRE SAVON	LAVENDER SAVON
HELIANTHINE SAVON	LILAC A SAVON
ISYLA SAVON	ORIGANOL SAVON
JASMIN BASE SAVON	TEA ROSE SAVON

and many others

Also special odors for:

THEATRE SPRAYS, LIQUID SOAPS, SHAVING CREAMS, DISINFECTANTS

POLAK'S FRUTAL WORKS, INC.

350 W. 31st St. **New York City**

CHICAGO BRANCH—16 South Peoria St.

COULD YOUR FILLERS DO THIS JOB? • • •

Quickly, accurately, cleanly, the wide variety of "Farmers Pride" products goes into an equally wide variety of containers with the help of Stokes & Smith Universal Fillers.

Changing from one container to another of different size or style is but a few minutes' work. And each time the auger feed of a Stokes & Smith Filler puts a measured or weighted portion of "Farmers Pride" merchandise into its container, there is a definite, measurable cash saving.

Accurate, S & S Fillers prevent over-filling, save the loss of goods that are sold but never paid for. Clean, S & S Fillers prevent drip or spill, waste or unsanitary working conditions. Fast, each Filler does the work of several experienced hand operators. Flexible, S & S Fillers will fill almost any container with almost anything.

Details and specifications will be gladly furnished upon request

STOKES & SMITH Co

PACKAGING MACHINERY · PAPER BOX MACHINERY

4916 Summerdale Avenue

PHILADELPHIA, PA.

Say you saw it in SOAP!

CURRENT PRICE QUOTATIONS

As of October 8, 1932

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums.....lb.	.10	.11
Acid, Boric, bbls., 99½%.....ton	95.00	100.00
Cresylic, 97% dk., drums.....gal.	.42	.43
97-99%, pale, drums.....gal.	.49	.53
Formic, 90%, tech.....lb.	.10½	.12
Oxalic, bbls.....lb.	.11	.11¼
Adeps Lanae, hydrous, bbls.....lb.	.14	.15
Anhydrous, bbls.....lb.	.15	.16
Alcohol, Ethyl, U. S. P., bbls.....gal.	2.45	2.59
Complete Denat., No. 5, drums., ex. gal.	.35½	.43½
Alum. potash lump.....lb.	.03	.03¼
Ammonia Water, 26°, drums, wks...lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls...lb.	.08	.12½
Bleaching Powder, drums.....100 lb.	1.75	2.35
Borax, pd., cryst., bbls., kegs....ton	50.00	55.00
Carbon Tetrachloride, car lots.....lb.	—	.06¼
L. C. L.....lb.	.06½	.07
Caustic, see Soda Caustic, Potash Caustic		
China Clay, filler.....ton	10.00	25.00
Cresol, U. S. P., drums.....lb.	.10½	.11
Creosote Oil tanks.....gal.	.11½	.12½
Formaldehyde, bbls.....lb.	.06	.07
Fullers Earth.....ton	15.00	24.00
Glycerine, C. P., drums.....lb.	.10¼	.10½
Dynamite, drums .....lb.	.07	.07¼
Saponification, tanks .....lb.	.05	.05½
Soaps, Lye, tanks.....lb.	.04½	.04¾
Hexalin, drums .....lb.	—	.30
Kieselguhr, bags .....ton	—	35.00
Lanolin, see Adeps Lanae.		
Lime, live, bbls.....per bbl.	1.70	2.20
Mercury Bichloride, kegs.....lb.	.93	1.08
Naphthalene, ref. flakes, bbls.....lb.	.03¾	.05
Nitrobenzene (Myrbane) drums....lb.	.09½	.11
Paradichlorbenzene, bbls., kegs....lb.	.15	.23
Paraformaldehyde, kegs .....lb.	.38	.39
Petrolatum, bbls. (as to color).....lb.	.01⅞	.06¾
Phenol, (Carbolic Acid), drums....lb.	.14¼	.16
Pine Oil, bbls.....gal.	.61	.66
Potash, Caustic, drums.....lb.	.06⅛	.06⅜
Flake .....lb.	.07	.08
Potassium Bichromate, casks.....lb.	.08	.08½
Pumice Stone, powd.....100 lb.	2.50	4.00
Rosins (600 lb. bbls. gross for net)—		
Grade B to H, basis 280 lbs.....bbl.	3.65	4.05
Grade K to N.....bbl.	4.62	5.25
Grade WG and WW.....bbl.	5.80	6.70
Wood .....bbl.	3.63	3.83
Rotten Stone, pwd. bbls.....lb.	.02½	.04½
Silica, Ref., floated.....ton	18.00	22.00
Soap, Mottled 40 lb. box.....lb.	—	.12
Olive Castile, bars, powder.....lb.	.12	.22
Powdered White, U. S. P.....lb.	.14	.16
Green, U. S. P.....lb.	.06½	.07½
Tallow Chips .....lb.	.07½	.08
Whale Oil, bbls.....lb.	.04	.04½
Soda Ash, contract, wks., bags, bbls. 100 lb.	1.12½	1.38
Car lots	—	1.00
Soda Caustic, Cont., wks., sld...100 lb.	—	2.50
Flake .....lb.	—	2.90
Liquid, tanks .....lb.	—	2.15
Soda Sal.. bbls.....100 lb.	1.05	1.15
Sodium Chloride (Salt).....ton	11.40	14.00
Sodium Fluoride, bbls.....lb.	.07½	.08½
Sodium Hydrosulphite, bbls.....lb.	.22	.26
Sodium Silicate, 40 deg., drum, 100 lb.	.75	.80
Drums, 60 deg. wks.....100 lb.	—	1.65
In tanks, 15c. less per hundred, wks.		
Tar Acid Oils, 15-25%.....gal.	.21	.25
Trisodium Phosphate, bags, bbls.....lb.	.03	.0390
Zinc Oxide, lead free.....lb.	.06	.06¼
Zinc Stearate, bbls.....lb.	.16	.18

Oils—Fats—Greases

Castor, No. 1, bbls.....lb.	.09¾	.10½
No. 3, bbls.....lb.	.09¼	.10
Coconut		
Ceylon, Coast Tanks .....lb.	.03⅛	.03¼
Cochin, barrels, N. Y. .....lb.	.05⅛	.05¼
Manila, tanks, N. Y. .....lb.	.03½	.03⅝
Tanks, Pacific Coast.....lb.	.03⅛	.03¼
Cod, Newfoundland, bbls.....gal.	.21	.26
Copra, bulk, Coast .....lb.	.0190	.0195
Corn, tanks, mills.....lb.	.04¼	.04⅜
Bbls., N. Y.....lb.	.05½	.05¾
Cottonseed, crude, tanks, mill....lb.	.03¼	.03½
PSY .....lb.	.04⅛	.04¼
Degras, Amer., bbls.....lb.	.02½	.03¾
English, bbls .....lb.	.03⅝	.03⅞
German, bbls .....lb.	.02⅞	.03⅛
Neutral, bbls. .....lb.	.06½	.08½
Greases, choice white, bbls., N. Y...lb.	.03⅛	.04½
Yellow .....lb.	.02⅞	.03
House .....lb.	.02⅞	.03
Lard, prime, steam, tierces.....lb.	.05	.05⅛
Compound tierces .....lb.	.06½	.07
Lard Oil,		
Extra, bbls. .....lb.	—	.07½
Extra, No. 1, bbls. .....lb.	—	.07
No. 2, bbls. .....lb.	—	.06½
Linseed, raw, bbls., spot.....lb.	.0620	.0660
Tanks, raw .....lb.	—	.0560
Boiled, 5 bbls. lots.....lb.	—	.0740
Menhaden, Crude, tanks, Balt. ...gal.	—	.10½
Oleo Oil, No. 1, bbls., N. Y. .....lb.	—	.06⅛
No. 2, bbls., N. Y. .....lb.	—	.05⅝
Olive, denatured, bbls., N. Y.....gal.	.58	.59
Foots, bbls., N. Y. .....lb.	.04½	.04⅝
Palm, Lagos, casks, spot.....lb.	—	.04
Shipments .....lb.	.03¼	.03½
Niger casks, spot .....lb.	.03½	.03⅝
Shipments .....lb.	—	.03
Palm Kernel, casks, denatured ....lb.	.04½	.04⅝
Tank cars, denatured .....lb.	—	.03¾
Peanut, domestic tanks .....lb.	.04⅜	.04½
Red Oil, distilled, bbls. .....lb.	.06⅝	.07¼
Saponified, bbls. .....lb.	.06⅝	.07¼
Tanks .....lb.	—	.05¾
Soya Bean, domestic tanks, N. Y...lb.	—	.03¾
Stearic Acid		
Double pressed .....lb.	.08	.08½
Triple pressed, bgs. .....lb.	.10¾	.11¼
Stearine, oleo, bbls. .....lb.	.06¼	.06⅜
Tallow, special, f. o. b. plant .....lb.	.03¼	.03⅜
City, ex. loose, f. o. b. plant .....lb.	.03⅜	.03½
Tallow, oils, acidless, tanks, N. Y. ..lb.	—	.06¼
Bbls., c/l, N. Y. .....lb.	—	.06¾
Whale, nat. winter, bbls., N. Y. ..gal.	.51	53
Blchd., winter, bbls., N. Y. ....gal.	.54	.55
Extra blchd., bbls., N. Y. .....gal.	.57	.58

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As of October 8, 1932

Essential Oils

Almond, Bitter, U. S. P.	lb.	$2.25	$2.50
Bitter, F. F. P. A.	lb	2.50	2.75
Sweet, cans	lb	.38	.40
Apricot, Kernel, cans	lb.	.24	.26
Anise, cans	lb.	—	—
U. S. P., cans	lb.	.30	.31
Bay, tins		1.60	1.90
Bergamot, coppers	lb.	1.90	2.00
Artificial	lb.	1.35	1.50
Birch Tar, rect., bot.	lb.	.45	.50
Crude, tins	lb.	.13	.14
Bois de Rose, Brazilian	lb	.92	1.00
Cayenne	lb	1.90	2.10
Cade, cans	lb.	.26	.27
Cajuput, native, tins	lb.	.52	.54
Calamus, bot.	lb.	2.75	3.00
Camphor, Sassy, drums	lb	.12	.13
White, drums	lb.	.13	.14
Cananga, native, tins	lb.	1.60	1.70
Rectified, tins	lb.	2.05	2.15
Caraway Seed	lb.	1.55	1.65
Cassia, Redistilled, U. S. P.	lb.	.86	.88
drums	lb.	—	.84
Cedar Leaf, tins	lb.	.70	.75
Cedar Wood, light, drums	lb.	.28	.30
Citronella, Java, drums	lb.	.49	.50
Citronella, Ceylon, drums	lb.	.35	.36
Cloves, U. S. P., cans	lb.	.90	1.00
Eucalyptus, Austl., U. S. P., cans	lb.	.25	26
Fennel, U. S. P., tins	lb.	1.00	1.10
Geranium, African, cans	lb.	4.20	4.60
Bourbon, tins	lb.	4.30	4.70
Hemlock, tins	lb.	.75	.80
Lavender, U. S. P., tins	lb.	1.85	3.50
Spike, Spanish, cans	lb.	.55	.75
Lemon, Ital., U. S. P.		.80	1.25
Lemongrass, native, cans	lb.	.46	.47
Linaloe, Mex., cases	lb.	1.50	1.60
Neroli, Artificial	lb.	10.00	20.00
Nutmeg, U. S. P., tins	lb.	.95	1.00
Orange, Sweet, W. Ind., tins	lb.	1.20	1.25
Italian cop.	lb	1.20	1.90
Distilled	lb.	.75	.80
Origanum, cans, tech.	lb.	.25	.40
Patchouli	lb.	3.75	5.50
Pennyroyal, dom.	lb.	1.55	1.60
Imported	lb.	1.10	1.15
Peppermint, nat. cases	lb	1.70	1.80
Redis., U. S. P., cases	lb	1.90	2.05
Petit Grain, S. A., tins	lb	1.00	1.10
Pine Needle, Siberian	lb.	.60	.63
Rose, Natural	oz.	6.50	15.00
Artificial	oz.	2.00	2.75
Rosemary, U. S. P., drums	lb.	.36	.40
Tech., lb. tins	lb.	.30	.31
Sandalwood, E. Ind., U. S. P.	lb.	6.50	7.50
Sassafras, U. S. P.	lb	.75	.85
Artificial	lb.	.19	.21
Spearmint, U. S. P.	lb.	1.00	1.05
Thyme, red, U. S. P.	lb.	.50	.65
White, U. S. P.	lb.	.60	.70
Vetivert, Bourbon	lb.	4.50	5.00
Java	lb.	16.00	20.00
Ylang Ylang, Bourbon	lb.	5.15	6.50

Aromatic Chemicals

Acetophenone, C. P.	lb.	$2.00	$3.00
Amyl Cinnamic Aldehyde	lb.	3.50	4.25
Anethol	lb.	1.20	1.40
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.20	1.35
Benzyl, Acetate	lb	.60	.95
Alcohol	lb.	.80	1.30
Citral	lb.	2.10	2.40
Citronellal	lb.	1.75	2.50
Citronellol	lb.	2.50	3.50
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.60	4.00
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	1.10	1.20
Eucalyptol, U. S. P.	lb.	.60	.70
Eugenol, U. S. P.	lb.	3.00	4.00
Geraniol, Domestic	lb.	1.45	2.00
Imported	lb.	2.00	3.25
Geranyl Acetate	lb.	2.50	4.00
Heliotropin, dom.	lb.	2.00	2.50
Imported	lb.	2.50	4.00
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.50	5.00
Ionone	lb.	4.00	6.50
Iso-Eugenol	lb.	4.00	5.00
Linalool	lb.	1.95	3.25
Linalyl Acetate	lb.	2.40	3.15
Menthol	lb.	3.35	3.50
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.20	2.60
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	6.75	7.25
Ketone	lb.	6.00	7.50
Moskene	lb.	5.40	5.90
Xylene	lb.	2.75	3.00
Phenylacetaldehyde	lb.	4.75	7.25
Phenylacetic Acid, 1 lb., bot.	lb.	3.00	4.00
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.25	4.50
Rhodinol	lb.	6.00	9.50
Safrol	lb.	.26	.28
Terpineol, C. P., 1,000 lb. drs.	lb.	.28	.30
Cans	lb.	.33	.34
Terpinyl Acetate, 25 lb. cans	lb.	.80	.95
Thymol, U. S. P.	lb.	1.50	1.75
Vanillin, U. S. P.	lb.	4.50	5.75
Yara Yara	lb.	1.60	3.00
Insect powder, bbls.	lb.	.18	.20
Concentrated Extract	gal.	1.50	1.70
Gums—			
Arabic, Amb. Sts.	lb.	.06	.06½
White, powdered	lb.	.10	.11
Karaya, powdered No. 1	lb.	.09½	.10
Tragacanth, Aleppo, No. 1	lb.	.80	.85
Sorts	lb.	.08	.10
Waxes—			
Bayberry, bgs.	lb.	.16	.18
Bees, white	lb.	.30	.33
African, bgs.	lb.	.14	.15
Refined, yel.	lb.	.20	.30
Candelilla, bgs.	lb.	.12	.13
Carnauba, No. 1	lb.	.26	.26½
No. 2, Yel.	lb.	.24	.25
No. 3, Chalky	lb.	.13	.14
Japan, cases	lb.	.07	.07¼
Paraffin, ref. 125-130	lb.	.03⅜	.04⅛

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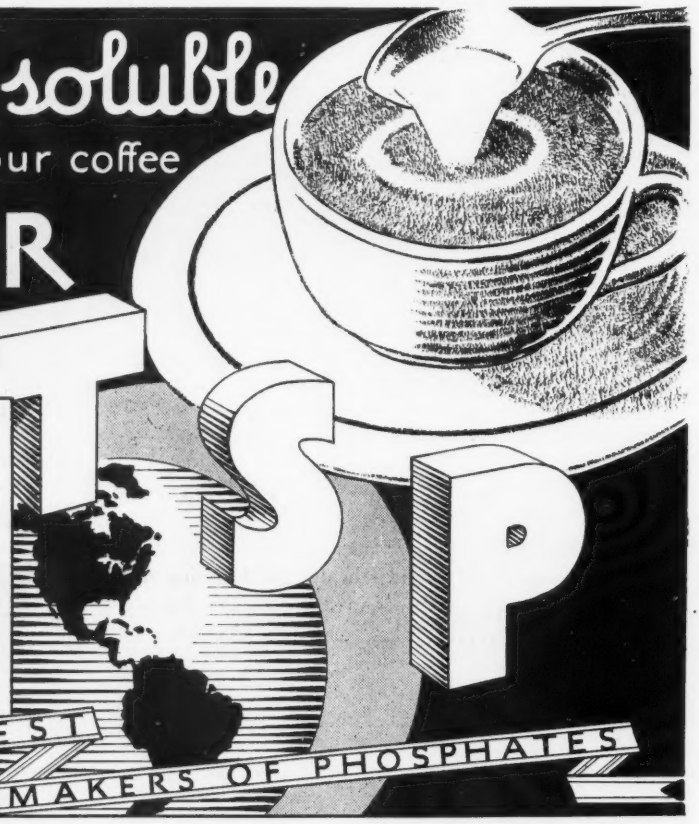

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Steel Pails and Drums 1 to 65 Gallons

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Rosin Output Down 30%

(*From Page* 21)

the 1932 season. As a result there was no great accumulation of stocks and no acute fluctuation in the market. The relatively stable price of wood rosin over the past two years stands out in contrast to the uncertain movement of gum rosin prices. The industry possesses the same ability to expand production at short notice, guaranteeing consuming industries of future availability of stocks and comparative stability of prices.

—o—

Impurities in Raw Materials

(*From Page* 30)

kettle as they form the sticky insoluble soaps which are apt to affect the lather producing property of the finished soap. These small percentages of distinctly unwanted chemicals drag down the quality and seriously endanger popularity and sales. Usually the soap boiler is content to test consignments of liquid silicates by dropping in the hydrometer. If the instrument reads within a degree of specification, the silicate is considered suitable for use and up to strength. While this rough and ready method is quick and easy to perform, it tells nothing of the real purity of the sample and may even mislead regarding strength. The manufacturer should periodically subject his bought silicates to complete analysis so that he may have a full check on the strength and purity.

Important producers of silicates are now able to supply products of exceptionable purity and uniformity owing to the fact that they are made under the closest scientific supervision. To avoid all regrets, the soap boiler should seek out the best. Even if it means the expenditure of a few extra dollars per consignment, the resulting soap will benefit to a greater monetary degree and thus make it a profitable investment, one accompanied by no regrets. In the case of cheap silicate or silicate and rosin soaps, the purity of the water glass is not of such great importance as when this chemical is used for the better class soaps to increase detergent action. As silicate is now added to expensive toilet soaps and even shaving creams and sticks it is obvious that a chemically pure material is essential.

—o—

The quantity of washing materials produced in Russia during the first half of 1932 was 115,653 tons, an increase of 78.2 per cent on the first half of 1931. The soap factories are still experiencing great difficulties in their supplies of raw materials, and owing to the shortage of these latter most of the plants were shut down in July. It is, consequently, very doubtful whether the output for the second half of this year will in any way approach that of the first half.

—o—

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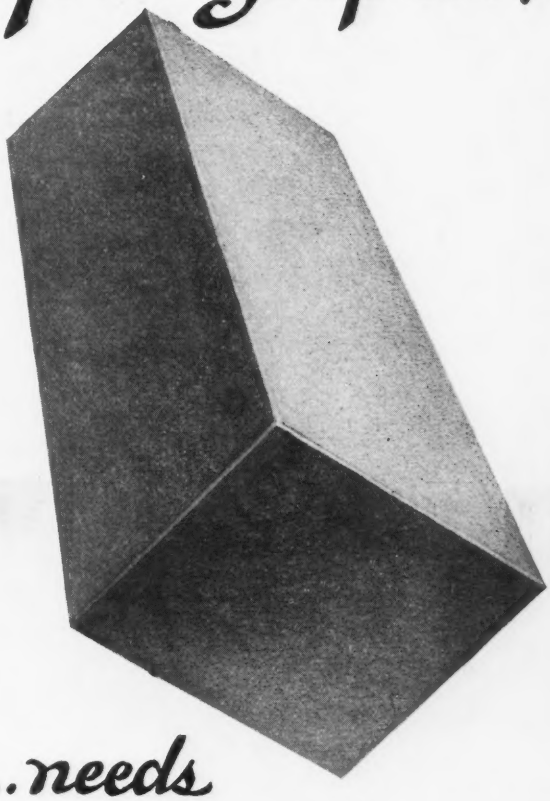

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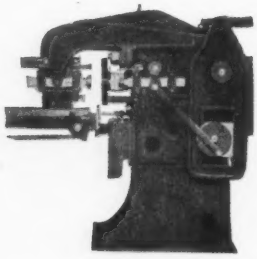

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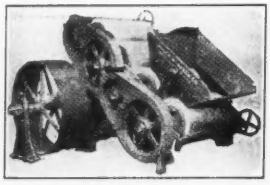

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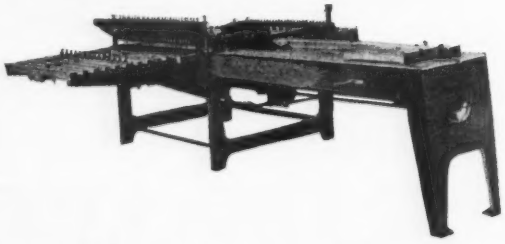
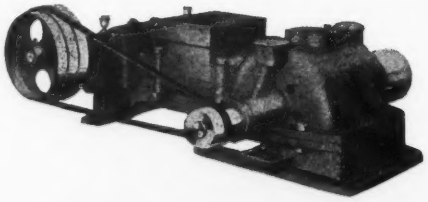


2—Automatic Power Soap Cutting Tables.



3—10A Soap Powder Mills.

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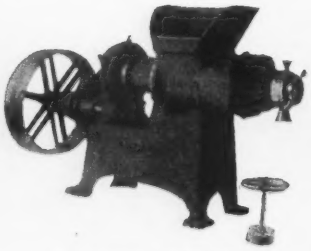

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Oil-Fat-Soap
PRODUCTION SECTION
A section of SOAP devoted to the technology of oils, fats, and soaps, published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Milled Cold and Half-Boiled Soaps

COMPETITION in the soap industry necessitates economical manufacture of soap without sacrificing any of its inherent good qualities. In other words, today the soap must sell cheaply but it must be a good soap, not one filled with too much inert matter. Furthermore the keeping quality of the soap must not be spoiled by the effort to reduce its manufacturing cost. It is reported from German sources that an effective method for accomplishing this end has been worked out with the aid of half-boiled soap. It appears that considerable quantities of this soap can be worked up with ordinary curd soap into a milled soap of good quality. The process is not new but has been described only recently in *Die Seifen, Oel- und Fettindustrie*, 1932, page 297-8. The author claims to have obtained good results with his process for ten years.

He first prepares the half-boiled soap. This is done in 6600 pound batches in a kettle provided with a hot-water jacket but not with mechanical agitators. The soap is accordingly agitated by hand. The manufacturing process lasts over two days. On the afternoon of the first day, the hot stock (at about 65 degrees C) is charged into the slightly prewarmed kettle through a fine meshed screen or cloth. Lye (35 degrees Be) is added simultaneously through the same screen and the mixture in the kettle is stirred constantly.

The correct initial temperature of the stock varies with its composition between 55 to 65 degrees C. The kettle is tightly closed after the lye and fat have been charged into it. At the end of the first day steam is introduced into the jacket of the kettle for about 20 minutes, the period depending on the temperature of the room. The purpose is to prevent the soap mass from solidifying on the walls of the kettle.

The soap is formed over night. It is then heated in the morning to about 90 degrees C and well agitated. The alkali content of the soap is determined and sufficient coconut oil is added to bring the excess alkali down to 0.12 per cent. At the close of the second day, the soap is removed from the kettle into suitably large frames. The stock consists of at least 60 per cent tallow, from 10 to 30 per cent coconut oil, from 10 to 20 per cent bleached palm oil and a maximum of 5 per cent peanut oil. Castor oil and very light color rosin are always added in constant proportions of 5 and 0.5 per cent respectively.

The keeping qualities of the soap were tested on a sample taken from each batch made. These samples were kept for two years. They showed no change either in color or in odor.

The half-boiled soap was then worked up into milled soap. The half-boiled soap can be dried like ordinary curd soap. However, due to the fact that all the glycerin of the fats is contained in this soap, it is hygroscopic. The dried soap is cut into flakes and added in this form to ordinary curd soap also in flakes. The experiments that were carried out on mixtures of the two soaps were undertaken to determine the effect of the addition of various proportions of the half-boiled soap on the hygroscopicity of the mixture. The samples of milled soap, which were obtained in this manner, were placed in a room, where they were exposed to air of high humidity and also to great variations of temperature over a 24 hour period. Hence conditions were eminently favorable for the soap sweating.

Curd soaps, containing half-boiled soap, mill perfectly. When the latter is made from 30 per cent coconut oil, the milled soaps lather very well; they do not crack on use nor break into small pieces. They are also very plastic. Experiments were also made with curd soaps difficult to mill, due to too high a salt content or to the titer of the fat. The addition of 20 to 30 per

cent of half-boiled soap gives large bars without scaly formation. On the other hand ordinary, unmixed curd soap will be scaly throughout under similar conditions.

The hygroscopicity experiments were made with mixtures of curd soap and half-boiled soap, containing from 25 to 50 per cent of the latter, the proportion being increased by 5 per cent in each batch. The keeping qualities of the soaps were found to be perfect in all cases. However in the case of soap, containing 50 per cent of half-boiled soap and 50 per cent of curd soap, after 2 years the soap was affected by moisture and sweated although the paper wrapped around it had not been penetrated by the moisture. This soap also had a high luster.

When more than 50 per cent of the half-boiled soap is milled with the curd soap, a product is obtained whose hygroscopicity is slowly manifested in humid atmosphere. After one year these soaps become dull and are affected by moisture. Experiments were carried out on milled soaps containing as much as 70 per cent of half-boiled soap. The increased amount of the latter present in the milled soap did not appear to injure its keeping qualities any more than a 50 per cent addition.

A suitable preservative may be added to the soap. It was found to give a soap, containing above 50 per cent of half-boiled soap, equal in keeping qualities and appearance to a standard 80 per cent toilet soap. The preservative acts to reduce the hygroscopicity of the soap or covers the exterior of the soap cake with a protective film, so that moisture cannot affect it. The action may be chemical or mechanical.

Good results were obtained by this method of making half-boiled-curd soap mixtures even when the grade of tallow used was poor and badly colored. In such this case, the addition of 0.2 to 0.3 per cent of zinc oxide improved the color materially.

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Mixtures of ethyl alcohol and glycerin in the proportion of 2 to 1 may be used for removing the acidity of highly acid oils. Laboratory tests have shown that the fatty acids extracted do not entrain much neutral oil. A suitable plant may be designed for carrying out this process on a practical scale.—E. Schlenker. *Allgemeine Oel und Fett Zeitung*, 1932, volume 29, pages 343-346.

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Washing compositions are made by mixing solid soaps, preferably curd soaps containing 15 to 35 per cent water, with more than 60 per cent of salts, and then by pressing the mixtures into sheets which are cut to form flakes or chips. The salts added may have a bleaching, softening or wetting action, and comprise potassium or sodium carbonate, bicarbonate, silicate, sulfate, borate, acetate, nitrate, phosphate or per-salts, such as perborate. Emulsifying or wetting agents, such as turkey red oil, cyclohexanol, aromatic or hydroaromatic sulfonic acids or salts, for example sodium tetrahydronaphthalene-sulfonate or betanaphthalene-sulfonic acid may be added. The compositions may also contain solvents, such as decalin or tetralin, turpentine or chlorinated hydrocarbons. Michael Industrie A.G., Berlin, Germany. British Patent No. 361,658.

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Metallic Soaps in Equipment Corrosion

Fats and oils form insoluble metallic soaps, especially when oxygen is present. The formation of these soaps is generally responsible for the corrosion of equipment and apparatus used in processing fats and oils and in the manufacture of soap. Experiments have been reported (*Seifensieder Zeitung*, 1932, volume 59, pages 343-4) which show that the degree of corrosion varies according to the nature of the metal. Figures, representing loss of weight in metal plates, 54 x 36 x 1.5 mm., are shown in the following table.

	Loss due to	
Metal	Oleic acid	Stearic acid
Copper	2.335 grams	5.806 grams
Nickel	0.675	0.089
Aluminum	0.024	0.022
Iron	0.914	1.241

The plates were immersed in the liquid to 2/3rds their depth for 24 hours at 130 degrees C. Air was not excluded. Corrosion of the metal took place in direct ratio to the formation of insoluble metallic soap, but the action varied widely. Aluminum reacts very little with fatty acids, that is oleic acid and stearic acid. This is also true for other fatty acids, but it should not be taken as a criterion for the action of all fatty acids on all metals. Aluminum is more resistant than most other metals to fatty acids. Some metals are however more or less resistant to oleic acid and stearic acid than to other fatty acids. Aluminum is superior in this respect to copper and its alloys, which are easily attacked by fatty acids. This is substantiated by the experience gained in the textile, soap and stearin industries with copper kettles and other equipment. The metallic soaps formed often act as catalysts, causing rancidity.

Alkali soaps are decomposed by contact with metals, such as zinc. First the zinc unites with the hydroxyl ions released by the hydrolysis of the soap and zinc hydroxide is formed. This combines with the free fatty acid, also a product of hydrolysis, to form a zinc soap, which emulsifies in the alkaline medium. Lead salts are formed in similar fashion.

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A composition suitable for cleansing porcelain bowls contains 80 parts by weight of sodium bisulfate, 4 parts by weight of a deodorizing perfume, such as phenol, or an essential oil, and 16 parts by weight of sodium sulfate. The addition of the latter prevents the sodium bisulfate from caking or liquefying when combined with the perfume. W. F. Nutt. United States Patent No. 1,865,948.

ON PRODUCTS AND PROCESSES

Linseed oil and olive oil rapidly increased in peroxide number and Kreis reaction on exposure in thin films to a daylight lamp, but oxidized but little in the dark. Soya bean oil, however, oxidized at the same rate in the light or the dark. Oils treated with bleaching earths readily became rancid. Bleached palm oil gave a strong peroxide and Kreis reaction, which decreased on illumination. E. I. Better, *Allgemeine Oel und Fett Zeitung*, 1932, volume 29, pages 3330-41.

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Wetting agents are made by the sulfonation of castor oil or mixtures of castor oil with other vegetable oils or fatty acids derived from them. Sulfonation is carried out at temperatures above zero degrees C but below 35 degrees C in the presence of sulfur dioxide, or substances which yield the same, such as sulfites or bisulfites. Liquid sulfurous acid is excluded. The sulfonation may be followed by oxidation either before neutralizing or preferably after washing. J. Riley & Sons Ltd., Hampton, Lancashire, England. British patent No. 365,904.

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A new method for refining coconut oil, as developed by the Industries Department of the Government of Bengal in India, involves percolation,—as distinct from the filtration of the oil,—through powdered and acid-washed animal charcoal. Experiments were also made with potassium bicarbonate without success. A solution of sodium hydroxide and sodium chloride also failed to give the desired results in removing the color or odor of the oil, although the acid number was decreased. Better results were obtained with sodium silicate, but the refined oil did not remain sweet for a sufficiently long time.—*The Chemical Trade Journal and Chemical Engineer.*

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Fatty acids are determined in soaps loaded with clay by dissolving 5 gms. of the soap in hot water in a separatory funnel, decomposing with excess sulfuric acid, and then adding 100-150 ccm. saturated sodium chloride solution. The fatty acid layer is separated and washed repeatedly with saturated salt solution until the wash liquor is neutral to methyl orange. The acids are then dissolved in ethyl alcohol. The salt solution is filtered and the clay is washed with hot water until the washings are neutral to methyl orange. The fatty acids retained by the clay are dissolved by washing on the filter with ethyl alcohol and the combined alcoholic solutions are titrated with half-normal alkali. G. Turbin. *Masloboino Zhirovoe Delo*, 1931, No. 10, 20-21, through *Chemie et Industrie*, volume 27, 1932, page 1392.

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Vegetable oils may be mixed with linseed oil in the preparation of potash soap and when present in the proportion of 25 to 50 per cent, they can be detected by the lower iodine number of the fatty acids. On the other hand, the addition of 20 per cent is shown by the lower yield of fatty acid hexabromides, m.p. 174 to 181 degrees C in the pure dried state. They darken above 200 degrees C without melting if there is 7 to 10 per cent of codliver oil in the soap. E. Bures and F. Fink. *Casopis Ceskoslov Lekarnictva*, volume 12, 1932, pages 29 to 33.

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Improved fatty acids are produced from low grade animal and vegetable oils, containing unsaturated fatty acids, by esterifying the unsaturated acids with an aliphatic alcohol, then polymerizing by heating to about 200 to 300 degrees C, but not to the boiling point. A current of inert gas may be passed through with or without reduced pressure, and the polymerized substances are finally split and the free fatty acids recovered. The esterification is carried out for example by refluxing the initial material with three times the theoretical quantity of a monohydric alcohol, preferably in the presence of about 5 per cent by weight of the alcohol of sulfuric acid or like dehydrating agent. If the esterification is carried out with glycerol, it should be used in quantity corresponding to that required for the production of triglycerides, the reaction being carried out at a pressure of 20 mm. mercury and at 170 to 230 degrees C. I. G. Farbeindustrie A. G., Frankfurt on the Main, Germany. British Patent No. 370,964.

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The hydroxyl number of oils, fats and waxes is defined as the number of mgms. of potassium hydroxide equivalent to the hydroxyl content of one gram of fat, oil or wax. Economy of time, reagents and sample is attained by carrying out the reaction in a sealed tube in the presence of acetic anhydride. After acetylation is complete, the excess acetic acid is determined by titration with half normal potassium hydroxide solution. In contradistinction to the current procedure for determining the acetyl number, the entire process is carried out in the presence of the acetylated product except in the case of such samples that contain free soluble acids, when separation is necessary prior to titration. Willard L. Roberts and H. A. Schuette, *Industrial & Engineering Chemistry*, 1932, pages 257 to 259.

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Recent Investigations in Fatty Oil Hydrogenation

Made by T. P. Hilditch

HYDROGENATION of fatty oils in the presence of catalysts, particularly nickel, is a complicated process, the results of which depend on the careful maintenance of operating conditions. As these are many and subject to considerable variation, the chemistry of the process becomes involved. One of the most important series of research on the subject was recently described in the *Journal of the Society of Chemical Industry* by T. P. Hilditch and his collaborators. They carried out three separate investigations. The first was concerned with the determination of the conditions of catalyst concentration which were most favorable to selective hydrogenation of a fatty oil by the agitation or "batch" process, in which a current of hydrogen is passed through the heated, vigorously agitated oil with a small amount of powdered nickel catalyst in suspension. The second studied the course of hydrogenation of cottonseed oil by the Bolton-Lush continuous hydrogenation process (Drip Method), and the third determined the relative amounts of solid and liquid oleic acids present at different stages of the hydrogenation of olive and cottonseed oils. The results obtained are important technically. The outstanding facts developed in these researches are given in the following paraphrased reproduction.

Refined cottonseed oil was employed in the first experiment. Its characteristics were acid value 0.4, saponification equivalent 288.5, iodine value 103.4, and unsaponifiable matter 0.8%. The mixed fatty acids of this oil, analyzed by the ester fractionation procedure, were made up of myristic (3.3%), palmitic (19.9%), stearic (1.3%), arachidic (0.6%), oleic (29.6%), and linoleic (45.3%) acids.

Four hundred g. of the cottonseed oil were placed in a closed iron vessel fitted with gas inlet and outlet tubes and with a stirrer which was rotated rapidly at constant speed during the hydrogenation; the inlet tube reached almost to the bottom of the vessel, while the exit connection was fitted in the lid. The catalyst employed was nickel supported on kieselguhr in the usual manner, and it contained about 10% of free metallic nickel; at each temperature three different concentrations of catalyst were tested, namely, 2, 5, and 10 g. of the reduced nickel-kieselguhr. The temperatures selected were 130° 170°, and 200°. Separate meters served to record the volumes of inlet and outlet hydrogen passing through the apparatus, and the process was interrupted for the withdrawal of 50 g. of the product when the hydrogen absorption indicated a fall in iodine value of approximately 10-12 units. Hydrogenation was continued in each experiment until an iodine value of about 50 was reached, previous work having indicated that, at about this stage, linoleic glycerides cease to be present.

The re-examination of the selection hydrogenation of cottonseed oil based on the results of this investigation has, substantially, confirmed the work of earlier investigators, while additional information has been obtained with reference to the influence of the proportion of catalyst present. The chief features disclosed by the present results are as follows:

1. The hydrogenation of the linoleic glycerides is selective in character under all the conditions examined, using a powder catalyst and the open, agitation system of hydrogenation.

2. The earlier conclusions that selective hydrogenation is most pronounced at higher temperatures have been confirmed; this is only natural in view of the fact that, while the rate of hydrogenation of oleic esters reaches a maximum at about 170° and thereafter declines, that of linoleic esters augments somewhat rapidly and steadily up to at least 250°.

3. Over the range of concentrations studied, the amount of catalyst present influences the selectivity of the hydrogenation somewhat differently from what might have been anticipated, namely, the process was definitely most selective when the greatest amount of catalyst (10 g. per 400 g. of oil) was employed. This relation holds at each of the temperatures at which observations were made, but is most marked at 130°, the action of 2 g. of catalyst per 400 g. of oil at 130° being definitely the least selective of the whole series.

4. The proportion of isooleic acids produced depends mainly on the temperature of hydrogenation and, in lesser degree, on the catalyst concentration; it increases with rise of temperature and, also (at any rate from 170° downwards), with increasing concentration of catalyst at any given temperature. At 200° the proportion of isooleic acids is much the same, for corresponding stages of saturation of the fat, whatever the proportion of catalyst present, while at 170°, with 10 g. of catalyst, the amount is also similar to that at 200°; but the amount produced at 170°, using 2 g. of catalyst, is distinctly less, while at 130° isooleic formation reaches

its lowest limit in this series, especially when only 2 g. of catalyst per 400 g. of oil are employed.

It will doubtless be borne in mind that, although the new analytical method marks a definite advance on those previously suggested for the determination of isooleic acids of hydrogenation, it is only claimed that the resulting data should be accurate to within three units per cent of the actual; nevertheless, it is clear that this order of accuracy is quite sufficient to render it effective in defining the combined effects of temperature and catalyst concentration on the formation of isooleic glycerides in the present series of experiments.

In 1923 Lush drew attention to the fact that the course of hydrogenation of olive or cottonseed oil by the now well-known Bolton-Lush continuous process differed according to the conditions of operation. If the "overflow" method is employed (in which the vessel containing the activated nickel turnings is maintained nearly full of oil, with a current of hydrogen passing upwards throughout), the products obtained are somewhat similar to those from the powder catalyst process, stearic glycerides appear relatively slowly until the linoleic derivatives have largely disappeared, and the proportion of isooleic glycerides produced is of the same order as in the "powder catalyst" or agitation process. If the oil is allowed to percolate in relatively thin films over the catalyst in an atmosphere of hydrogen (the "drip" method), Lush states that the proportion of isooleic derivatives in the product is much reduced, and also that a steady increase in the amount of stearic glycerides is observed from the commencement of the hydrogenation onwards.

Results obtained in the course of the second series experiments (which were undertaken primarily in order to secure data for the "drip" continuous process parallel with, and by the same analytical methods as, those given in the preceding paper) have led to a somewhat different explanation of these differences.

The apparatus used for the hydrogenation was a laboratory vessel (30 in. $\times$ 1 in.) with two cages containing activated nickel turnings. Experiments were made at the three temperatures chosen in the previous paper, and refined cottonseed oil was allowed to flow down the tubes at rates adjusted to give products of the desired reduction in iodine value; at least 50 g. of each sample were collected for examination after the experiment had proceeded sufficiently long to ensure that the product was free from contamination with any obtained previously at a different rate of flow. The electrolytic hydrogen used also passed in a downward direction through the apparatus at atmospheric pressure. In certain cases it was noticed that the catalyst had appreciably fallen off in activity, but otherwise it may be accepted that the activity of the catalyst was of the normal order.

The cottonseed oil had the following characteristics: acid value 0.1, saponification equivalent 289.3, iodine value 106.4, and unsaponifiable matter 0.8%. Its mixed fatty acids, analyzed by the ester fractionation process, consisted of myristic (2.0%), palmitic (19.6%), stearic (2.7%), arachidic (0.7%), oleic (24.6%), and linoleic (50.4%) acids; the saturated acids present in the mixed fatty acids of the original oil thus amounted to 25.0%.

When the results are compared with those for fats hydrogenated at corresponding temperatures by the "powder catalyst" agitation process it will be observed that, in the continuous process ("drip" method), (i) the amount of saturated acids increases from the outset and, correspondingly, the linoleic acid does not disappear so rapidly as in the "powder catalyst" method, and (ii) the proportion of isooleic acids is notably less than in the latter process. It is also indicated that the amount of oleic acid varies relatively little in the earlier stages of hydrogenation (indeed, the analytical method used is probably insufficiently accurate to follow the comparatively small variations involved). The process as a whole leads, therefore, to less selective results, and the proportion of isooleic acids in the products is comparatively low.

The mechanical conditions of the two hydrogenation processes are, of course, entirely different. In the agitation process, with a relatively small concentration of catalyst in oil and the whole system in rapid motion, maximum freedom of diffusion of the liquid fat phase (carrying dissolved hydrogen) to and from the surface of the solid catalyst particles is attained, and also maximum diffusion or intermixing of the various components of the liquid fat; indeed, with highly efficient agitation and in presence of low proportions of catalyst the heterogeneous liquid solid system may approximate fairly closely to homogeneity. In the "drip" continuous process, the liquid fat phase moves under the action of gravity downwards over a stationary mass of nickel turnings and intermixing of the liquid phase can only take place by lateral motion induced either by the "baffle" action of the irregular metal surfaces or by ordinary molecular diffusion; in general one would infer that gravity is the main factor and that the component particles of the liquid will tend to stream downwards rather than to undergo lateral diffusion to any marked extent.

A most marked feature is the relatively high proportion of fully-saturated components produced in the "drip" process for a given reduction in iodine value or, in other words, for a given proportion of saturated to unsaturated acids in the fats as a whole. This is perhaps made clearer by the following table, which shows (i) the proportions of fully-saturated glycerides which would be present in cottonseed oils hydrogenated by the agitation process, and of the same total saturated and unsaturated acid content for three fats, (ii) the observed proportions for the three "drip" method products, and (iii) the maximum amounts of fully-saturated components possible, *i.e.*, if the hydrogenation consisted exclusively in the production of molecules of completely saturated glycerides.

Iodine value of fat	76.9	62.7	48.2
Molar percentage of saturated in total mixed acids	36.2	42.1	52.2
% Fully-saturated glycerides—			
(i) Agitation process	3.5	7	16
(ii) "Drip" method (observed)	10.1	19.3	28.3
(iii) Maximum possible	12.5	21	35

Clearly, then, the result of hydrogenation by the "drip" continuous process is that those unsaturated glyceride molecules which are attacked are frequently taken much further in the direction of complete saturation than when the conditions of the hydrogenation process tend towards complete mixing and relative homogeneity of the reacting system. The rate of increase in fully-saturated components is thus not only in harmony with the foregoing considerations of gravitational flow of the unsaturated fat over the stationary catalyst, but also suggests that, in the later stages of passage over the nickel, the extent of contact between any partly-hydrogenated molecule and the catalyst persists, in the large majority of cases, until complete saturation is reached.

The distribution of the individual fatty acids in the fully-saturated and non-fully-saturated parts of the fat also reinforces this view of the action. When the "agitation" method with powder catalyst is employed, the successive stages of hydrogenation are clearly marked and, as has been said, palmitostearins are ultimately formed preferentially to tristearin; thus, over a considerable range (since cottonseed oil probably contains about 50% of mixed palmito-glycerides) the fully-saturated components produced contain a fairly constant and relatively high proportion of palmitic acid. In the "drip" continuous process, on the other hand, there is the tendency for initially-attacked glycerides (which, under equal conditions of access to catalyst by all glyceride molecules, would be the most unsaturated present) to undergo further hydrogenation more readily than in the "agitation" process; consequently, the ratio of stearic acid to palmitic acid in the completely saturated products is increased as compared with the latter method, since some of the tri-unsaturated glyceride molecules of the original oil become converted into tristearin by the operation of the "drip" process at stages when, under homogeneous conditions, they would only have reached the point of oleodistearins or even, perhaps, dioleostearins.

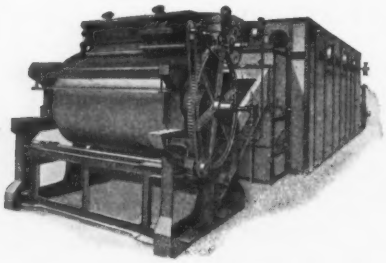
Similar consideration of the component fatty acids present in the non-fully-saturated part of the hydrogenated fats is equally interesting, since it affords some evidence that the glycerides which have escaped (by lateral diffusion) from the catalyst surface exhibit, to a considerable extent, the characteristics of normal, selectively hydrogenated products. The data for the components of non-fully-saturated glycerides are deduced from the differences between those of the whole fat and the fully-saturated part, and so their order of accuracy is presumably appreciably less than those derived by direct analysis.

It would appear that the data on the component glycerides of the three fats prepared by the "drip" continuous process give a fairly complete picture of the manner in which the course of hydrogenation is modified by the particular conditions of access of the unsaturated liquid phase to the catalyst. The composition of the incompletely saturated glycerides is very similar to that of the whole oil when hydrogenated under conditions approximating more closely to a homogeneous system, but much more of the fat becomes completely saturated for a corresponding degree of hydrogenation of the whole fat. Fat which is able to escape freely from the catalyst surface appears to follow the usual course of hydrogenation, but the gravitational flow of the liquid seems to result in a considerable proportion of the partly-hydrogenated product remaining in close proximity to succeeding parts of the catalyst surface and becoming further hydrogenated more frequently than happens when the "agitation" process is used. This tendency for a given unsaturated glyceride molecule to become completely saturated as the result of a more or less continuous series of contacts with the active catalyst centers also explains, the lower proportions of isooleic derivatives encountered in the "drip" method: many of the isomerized oleic radicals produced in the earlier stages of the hydrogenation become further hydrogenated to stearins instead of being swept away from the catalyst surface.

The fats prepared in the course of a recent investigation of the glyceride structure of partially-hydrogenated olive oils and cottonseed oils have also served as the basis for some fresh observations on the extent to which the solid or isooleic acids are present at different stages of the process. A number of analyses were made in this (the third) investigation, the results of which are dicussed below.

In the olive oil the amount of linoleic acid was very small in comparison with that of the oleic acid and the hydrogenation may be considered as almost exclusively that of oleic glycerides, since the quantity of isooleic derivatives produced from the small proportion of linoleic glycerides cannot seriously affect the results. On the contrary, linoleic derivatives form almost half of the cottonseed oil and so, in this case, during the first phase of the selective hydrogenation, isooleic glycerides will accumulate as the result of semi-hydrogenation of linoleins and not as the result of isomerization of oleins during catalytic hydrogenation of the latter. We have therefore (i) an example of (almost entirely) hydrogenation of oleic derivatives and (ii) another case in which the second (oleic) phase of the hydrogenation is entered upon when considerable amounts of both isooleic and oleic glycerides are already present; it is therefore desirable to deal with each oil separately.

In all cases the hydrogenated products were prepared from the oil (400 g.) with nickel-kieselguhr catalyst (10 g.) at 180° by means of the "open" agitation system, with a current of electrolytic hydrogen passing into and



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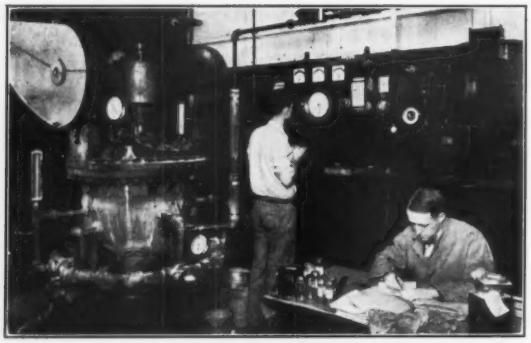

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away from the hydrogenation vessel throughout the operation.

These results lead to the following conclusions:—(i) that the apparent constant proportions of the solid and liquid oleic acids over a wide range of iodine values are obtained only when the isooleic acids are determined by methods which have ultimately been proved to be inadequate for the purpose, and (ii) that the improved method of analysis indicates the more gradual accumulation of isooleic acids. Subsequently a decline in the relative amount of isooleic to oleic acids may set in (the analytical figures for the final fat of low iodine value—11.9—may, however, be less certain than the others).

Consideration of both the olive and cottonseed oil series of hydrogenated fats leads to the conclusion that, while apparent equilibrium between isooleic and oleic acids is disclosed, there is no true equilibrium in the strict sense of the term. (If true equilibrium occurred, indeed, it should be attainable from either side).

We are inclined to regard the phenomena of the relative proportions of these solid and liquid oleic acids as the resultant of a number of factors, of which the actual resolution of cis- into trans-isomerides or vice versa is only one: the others will be the relative rates (if different) of hydrogenation of the cis- and trans-forms into saturated derivatives, and the initial accumulation, in the majority of fats hydrogenated in industry, of isooleic and oleic derivatives resulting from the reduction of more unsaturated components. The analytical methods available for the determination of solid oleic acids are still insufficiently certain to permit of any useful attempt to differentiate between these various factors. The position may be summed up as follows:

(i) Selective hydrogenation of polyunsaturated glycerides generally leads to the production of more isooleic than ordinary oleic derivatives;

(ii) Hydrogenation of monoethylenic derivatives (whether oleic, isooleic, or a mixture of the two) is usually accompanied firstly by changes (usually augmentation) in the ratio of solid to liquid oleic acids, secondly by a period in which this ratio reaches an upper limit but during which its rate of variation is relatively slow, and finally (although this is not so certain owing to possible inherent errors in the analytical procedure at this stage) the ratio may again decline to a certain extent.

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Stearin can be prepared from highly hardened fats without pressing. Large scale experiments were carried out and showed that the fatty acids obtained by hardening palm oil or beef tallow to melting points of about 58 degrees C and then saponifying by the autoclave process, were very similar in composition to commercial press-stearins. This refers to the content of stearic, palmitic and isooleic acids in the stearin. The product was also found to possess many, although not all, of the desired physical properties of press stearin. F. Wittka. *Allgemeine Oel und Fett Zeitung*, 1932, volume 29, pages 323-330.

Free Alkali Determination

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Glycol offers advantages over glycerin in this respect. Experiments showed that satisfactory results could be obtained with glycol and normal-propyl alcohol. A solution of 5 grams of soap in a mixture of normal-propyl alcohol and glycol (100 cc.) may be titrated at room temperatures. When the pure alcohol is used, the solution must be much more dilute. The practical use of this solvent mixture is recommended on the assumption that the solubility of carbonates is not sufficiently great under these conditions to interfere with the free alkali determination. It was found that with a mixed solvent of 80 per cent normal-propyl alcohol and 20 per cent glycol in the presence of neutral sodium stearate, sodium carbonate shows only a very faint color with phenolphthalein and thymolphthalein. The titrations should be made to a definite tint under carefully controlled conditions. W. Poethke. *Chemische Umschau*, 1932, page 121.

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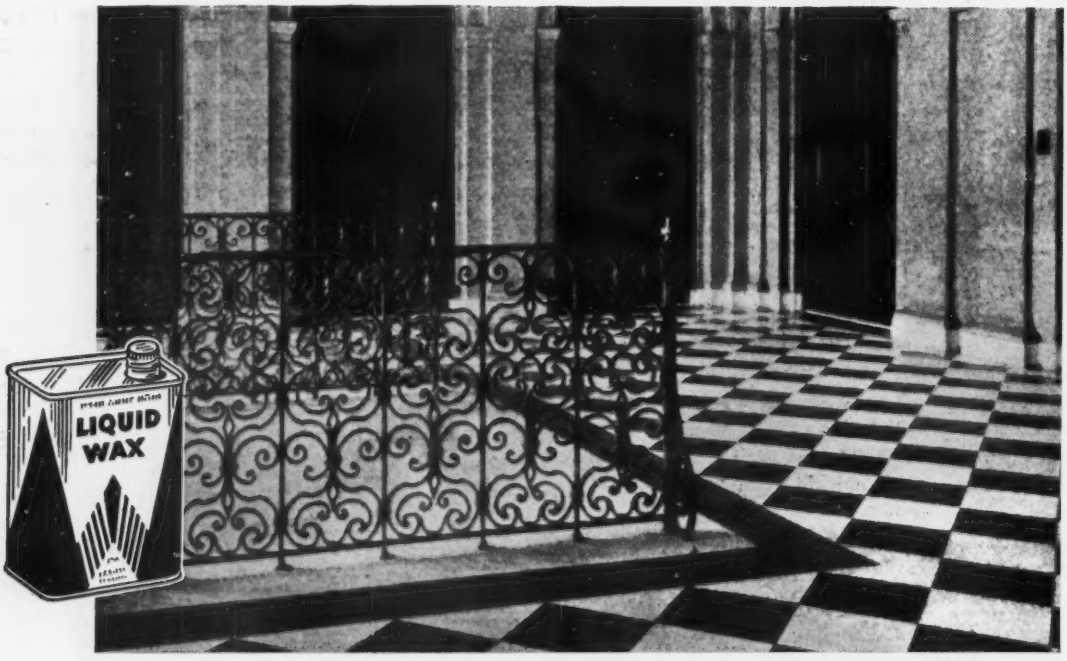

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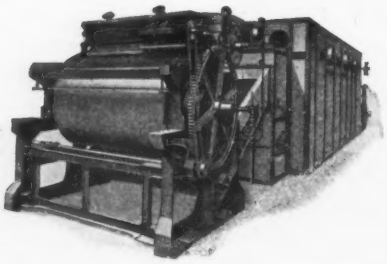

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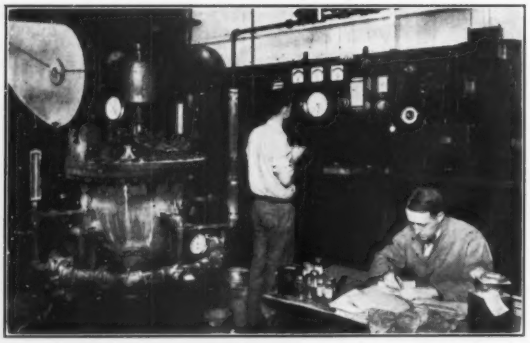

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away from the hydrogenation vessel throughout the operation.

These results lead to the following conclusions:—(i) that the apparent constant proportions of the solid and liquid oleic acids over a wide range of iodine values are obtained only when the isooleic acids are determined by methods which have ultimately been proved to be inadequate for the purpose, and (ii) that the improved method of analysis indicates the more gradual accumulation of isooleic acids. Subsequently a decline in the relative amount of isooleic to oleic acids may set in (the analytical figures for the final fat of low iodine value—11.9—may, however, be less certain than the others).

Consideration of both the olive and cottonseed oil series of hydrogenated fats leads to the conclusion that, while apparent equilibrium between isooleic and oleic acids is disclosed, there is no true equilibrium in the strict sense of the term. (If true equilibrium occurred, indeed, it should be attainable from either side).

We are inclined to regard the phenomena of the relative proportions of these solid and liquid oleic acids as the resultant of a number of factors, of which the actual resolution of cis- into trans-isomerides or vice versa is only one: the others will be the relative rates (if different) of hydrogenation of the cis- and trans-forms into saturated derivatives, and the initial accumulation, in the majority of fats hydrogenated in industry, of isooleic and oleic derivatives resulting from the reduction of more unsaturated components. The analytical methods available for the determination of solid oleic acids are still insufficiently certain to permit of any useful attempt to differentiate between these various factors. The position may be summed up as follows:

(i) Selective hydrogenation of polyunsaturated glycerides generally leads to the production of more isooleic than ordinary oleic derivatives;

(ii) Hydrogenation of monoethylenic derivatives (whether oleic, isooleic, or a mixture of the two) is usually accompanied firstly by changes (usually augmentation) in the ratio of solid to liquid oleic acids, secondly by a period in which this ratio reaches an upper limit but during which its rate of variation is relatively slow, and finally (although this is not so certain owing to possible inherent errors in the analytical procedure at this stage) the ratio may again decline to a certain extent.

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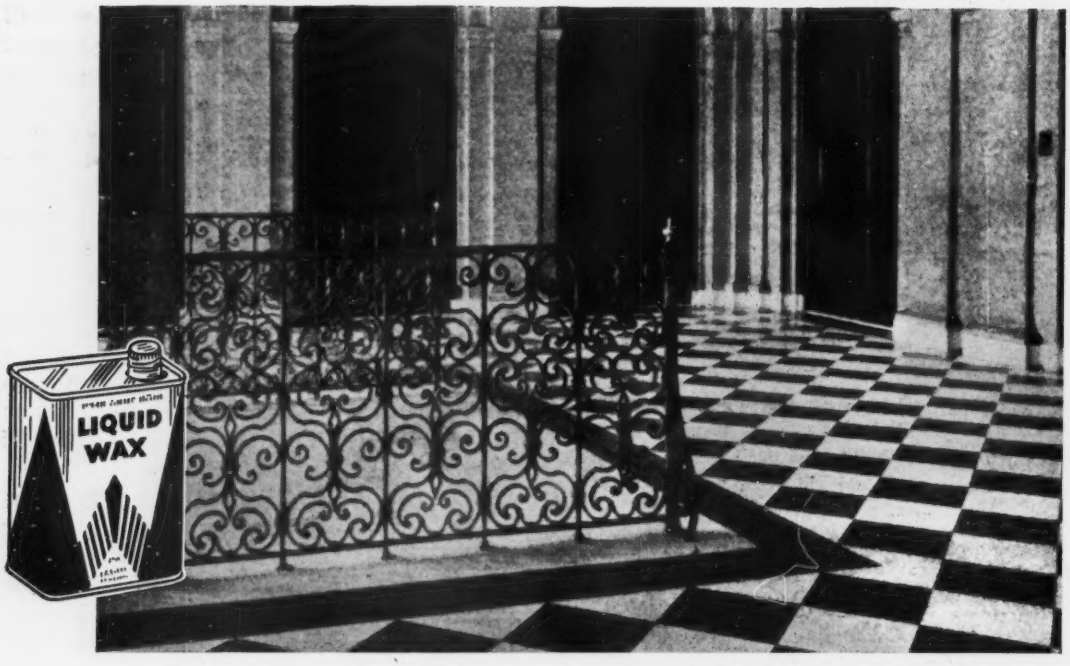

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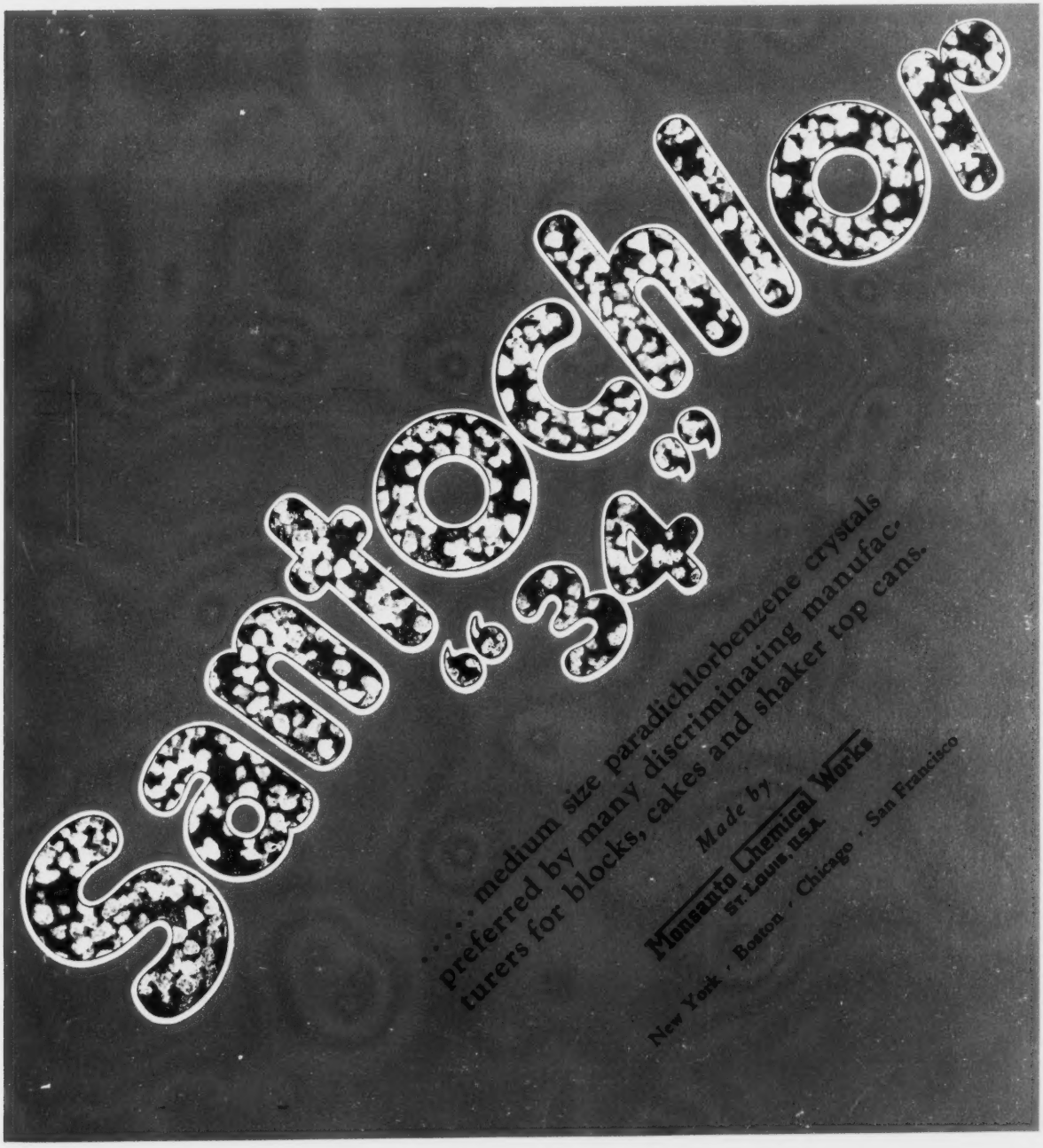
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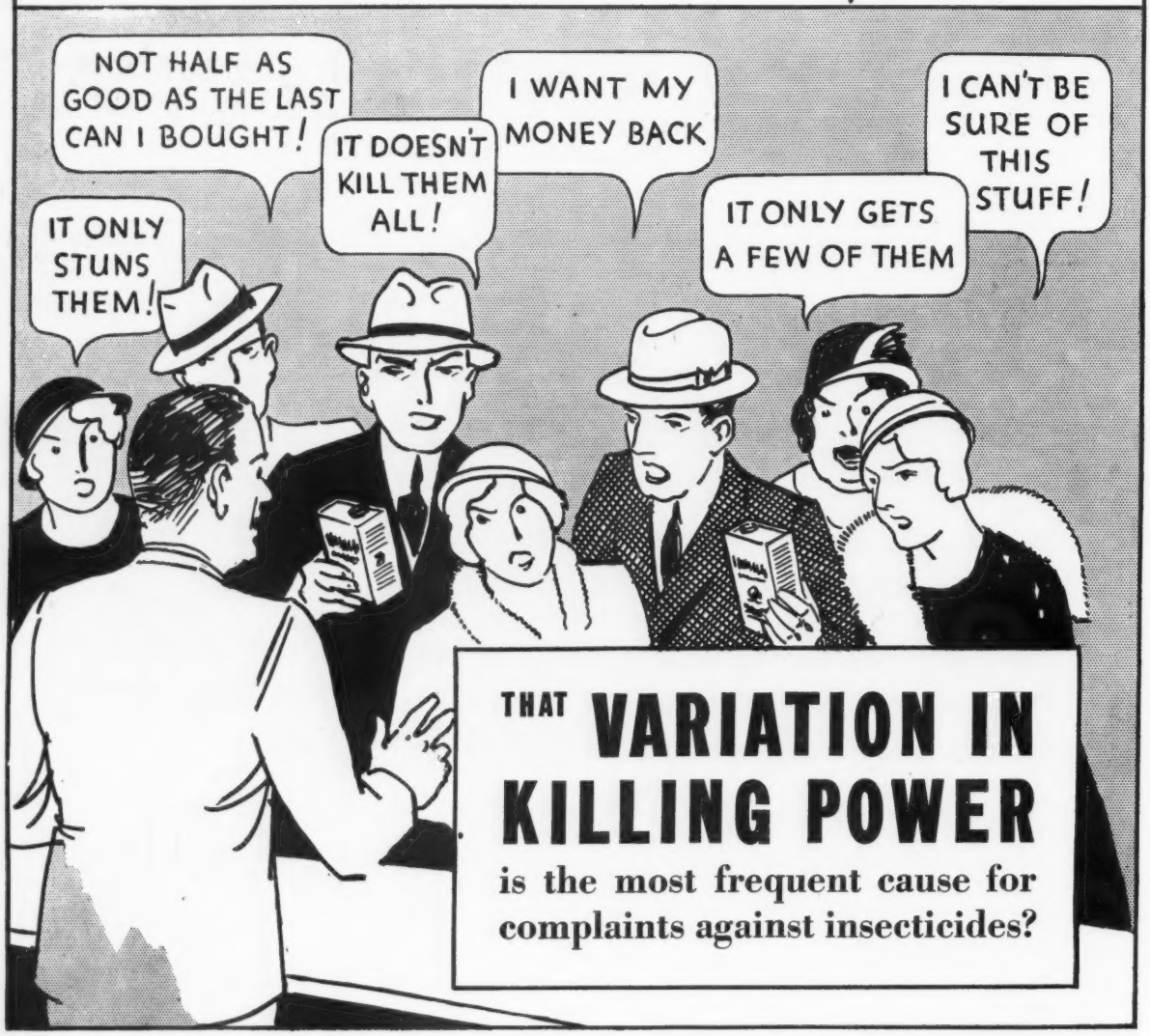
NOT HALF AS GOOD AS THE LAST CAN I BOUGHT!
IT DOESN'T KILL THEM ALL!
I WANT MY MONEY BACK
I CAN'T BE SURE OF THIS STUFF!
IT ONLY STUNS THEM!
IT ONLY GETS A FEW OF THEM

THAT **VARIATION IN KILLING POWER**
is the most frequent cause for complaints against insecticides?

IT'S A FACT: If your insecticide fails to give the same high kill every time it is used . . . you are losing sales as fast as you make them. The best way to produce an insecticide with unvarying killing power is to use a standardized extract. The original exactly standardized pyrethrum concentrate is Pyrocide 20.

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PYROCIDE 20 GIVES SAME HIGH KILL EVERY TIME

Make your 1933 Contract NOW for this Standardized Pyrethrum Extract . . . *Save Dollars Later!*

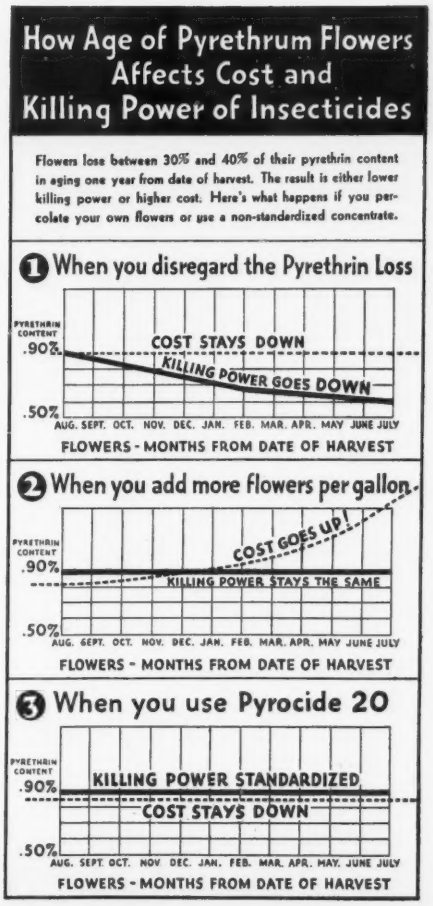
DON'T be mislead by "bargain" prices when you contract for your pyrethrum extract. There is only one way to save money on your purchase:

Be sure the extract you buy gives you uniform, high killing power—not only for the first few months but for every month you use it throughout the entire year.

It has been definitely proved that in aging, pyrethrum flowers lose as much as 25% of their killing power within the first six months. After a year the loss is between 30% and 40%. These new facts are most important to you as a manufacturer of pyrethrum insecticide. They reveal for the first time exactly why insecticides vary in killing power; why customers complain; why sales lag behind.

The only known way of avoiding this variation in killing power is to standardize the pyrethrin content of your insecticide. This is exactly what Pyrocide 20 does—at less cost than you could do it yourself.

Pyrocide 20 makes it easy to obtain uniform killing power. This concentrated extract of pyrethrum *always* contains 2.15 grams of pyrethrins per 100cc. (in percentages, 2.6% pyrethrins). It is not simply a "20-lb. exract". If flowers used in its manufacture contain less than .90% pyrethrins when percolated, we may use as many as 26 lbs. to the gallon in order to maintain the guaranteed pyrethrin content.


How Age of Pyrethrum Flowers Affects Cost and Killing Power of Insecticides
Flowers lose between 30% and 40% of their pyrethrin content in aging one year from date of harvest. The result is either lower killing power or higher cost. Here's what happens if you percolate your own flowers or use a non-standardized concentrate.
1 When you disregard the Pyrethrin Loss
PYRETHRIN CONTENT
.90%
.50%
COST STAYS DOWN
KILLING POWER GOES DOWN
AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY
FLOWERS - MONTHS FROM DATE OF HARVEST
2 When you add more flowers per gallon
PYRETHRIN CONTENT
.90%
.50%
COST GOES UP!
KILLING POWER STAYS THE SAME
AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY
FLOWERS - MONTHS FROM DATE OF HARVEST
3 When you use Pyrocide 20
PYRETHRIN CONTENT
.90%
.50%
KILLING POWER STANDARDIZED
COST STAYS DOWN
AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY
FLOWERS - MONTHS FROM DATE OF HARVEST

The price of Pyrocide 20 per gallon may be a little higher than that of ordinary concentrates, but the cost to you per unit of pyrethrin is much less.

It will pay you to get in touch with us before making any contracts for pyrethrum extract. Pyrocide 20 is shipped in steel drums containing 5, 10, 15, 30 and 53 gallons from warehouses in New York, Los Angeles, Minneapolis and many foreign cities. We can also supply flowers with known pyrethrin content in whole, ground or powdered form.

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CRESOL COMPOUNDS
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is similar in composition, appearance and odor to Cresol Compound, U. S. P., but prepared from refined cresylic acid as a base. Approximately twice as strong as the U. S. P. product, and very effective in preventing the spread of animal diseases. Approved by U. S. Bureau of Animal Industry.

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A coal-tar product employed for killing mosquito larvae. Effective in dilutions of 20,000 to 40,000 to one. Superior to petroleum oil, as it is not affected by rainfall or wind and does not involve fire hazard.

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of the pyrethrum type, pleasantly scented. Quickly kills practically every type of crawling, flying and hopping insect. Light lemon color. Especially effective when used in the form of a spray.

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For insecticides made with pyrethrum and kerosene, we suggest using one to six drams of any of the following oils in one gallon of finished spray.

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Orange Flower No. 11	3.00	Lilac No. 1	3.50
Orange Flower No. 12	2.00	Lilac No. 2	3.00
Cedar No. 11	2.00	Lilac No. 3	2.50
Cedar No. 12	1.00	Lilac No. 4	1.10
Jasmin No. 11	2.50	Lilacine No. 11	1.10
Jasmin No. 12	1.50	Vanilla Bouquet for Spray	3.00
Lavender No. 135	1.00	Bouquet No. 118	1.50
New Mown Hay No. 11	3.75	Bouquet No. 11	3.00
New Mown Hay No. 12	1.50	Bouquet No. 12	2.00
New Mown Hay No. 13	2.00	Spray Odor No. 195	4.80
Oriental	1.50	Spray Odor No. 353	4.50
Narcissus	2.25	Spray Odor No. 457	3.75
Violet No. 11	3.00	Spray Odor No. 276	3.00
Violet No. 12	1.75	Spray Odor No. 259	2.00
Mint No. 11	1.50	Spray Odor No. 11	5.50
Mint No. 12	1.00	Spray Odor No. 12	5.00
Honeysuckle No. 11	3.25	Spray Odor D. No. 5	5.25
Honeysuckle No. 12	3.00	Spray Odor No. 23	4.50
Rose No. 11	2.25	Tuberose	4.25

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619 Clark Avenue, St. Louis
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Special solutions to be used from 1 to 2 pounds to 100 pounds of deodorizing crystals. They can be used with *either* paradichlorbenzene, or naphthaline, or a combination of the two. *Any of the following colors may be used with any of the odors listed below.*

Colors	*Odors*	
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Blue		
Chypre green	Cedar	Orange
Light green	Hay	Oriental
Rose	Jasmin	Peppermint
Violet	Lilac	Pine
Yellow	Lily	Rose
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Grade A—any of the above odors with or without color $2.50 lb.

Grade B—any of the above odors with or without color $1.75 lb.

van Ameringen-Haebler, Inc.

Aromatic Essentials

315 Fourth Avenue, New York
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Say you saw it in SOAP!

For a
Quarter of a Century

Baird's

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INSECTICIDE AND DISINFECTANT SECTION

A Department of SOAP

SOAP is official publication of *The National Assn. of Insecticide and Disinfectant Manufacturers.*

Knowing and Buying

THE more ignorant the buyer, the better it is to the liking of the seller of adulterated and low-grade merchandise. As long as the buyer does not know what he is buying, he can be cheated. Such buyers are usually the ones who are most impressed by low prices and glib sales talk. The minute a buyer knows, or takes the trouble to find out, what he is buying, the *claims* of salesmen become merely statements to be checked up. No salesman will make claims which he knows can be disproved by a well-informed buyer.

Knowledge is the real guiding spirit behind intelligent purchasing. This is the reason why innumerable large organizations whose purchases run into millions *know* what they buy by setting up specifications and seeing that all purchases meet these specifications. That intelligent buying is distinctly to the advantage of the house which manufactures and sells honest merchandise, is quite obvious. It is for them to educate the buyer if they would not have their business taken away by the cheaters with low prices.

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The program committee chairman for the annual convention of the National Association of Insecticide & Disinfectant Manufacturers, Mr. Walter J. Andree of the Sinclair Refining Company, 45 Nassau Street, New York, is open to suggestions for topics to be included in the convention program in December. If you have a pet topic which you want placed on the program for general discussion, send word to Mr. Andree now.

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Now,—or Next March?

AS far as we can determine, the majority of insecticide manufacturers have just about quit their selling efforts for 1932. They state that the season is over. The next season will begin about February, and then they will again get busy. As far as the retail package trade is concerned, this is undoubtedly a good thing. The trouble has been heretofore that manufacturers have sent out salesmen long before the end of the year to take orders for delivery the following spring. They have been treading on the very heels of the waning consuming season.

Calling in salesmen on retail package goods and keeping them in until after the turn of the year is to be commended. However, in the sale of bulk material to institutions, factories, hotels, etc., and especially where material is purchased on contract, there is an entirely different problem. It would seem that this is the very time of year to lay the foundation of sales work, to familiarize the buyer with the product, to show him what it will do, to let him have it tested and find out if it will meet his needs for next season. Selling an insecticide in bulk on specification is

(*Turn to Page* 103)

National Assn. of Insecticide *and* Disinfectant Manufacturers

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Membership

Active—Open to manufacturers and wholesale distributors of disinfectants, germicides, deodorants, insecticides, liquid soaps, polishes, and allied products. Dues—$75.00 per year.

Associate—Open to firms supplying raw materials, containers, equipment, etc., to the membership. Dues—$50.00 per year.

For further details, communicate with

NATIONAL ASSOCIATION OF INSECTICIDE & DISINFECTANT MANUFACTURERS

Harry W. Cole, Secretary

HOLBROOK MASS.

Notes of the Trade

Standard Oil Co. of New York, The Pepsodent Company, Chicago, and the Dethol Manufacturing Co., Baltimore, were elected to membership in the National Association of Insecticide & Disinfectant Manufacturers at a recent meeting of the Board of Governors of the Association.

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David Hilson Powell, son of Mr. and Mrs. John Powell, was born Sept. 20 at the Orange Memorial Hospital, Orange, N. J. Mr. Powell is associated with John Powell & Co., New York. In his first interview with the press, young Mr. David Powell stated that he intended to be a fireman when he grew up and under no conditions would he enter the pyrethrum business.

—o—

A new Cleveland company has just been organized to manufacture and sell disinfectants at 941 Glengyle Street. The new organization will do business under the name of Albert & West. The incorporators are Tally M. Albert, S. G. West, Jr., and Robert K. West.

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J. H. Gerathy, who recently resigned from the staff of United Chemical & Drug Corp., Bridgeport, Conn., has joined J. L. Hopkins & Co., New York.

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Exterminators for rodents, and insects will be manufactured by the newly organized Crane Exterminator Co., 419 Leavenworth street, San Francisco.

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Marshall Dill, San Francisco manufacturers' representative with headquarters at 510 Montgomery Street, has been appointed to handle the products of Derris, Inc., for the Pacific Coast and Orient.

—o—

J. H. Andrus, advertising manager of R. M. Hollingshead Co., Camden, N. J., has returned to his desk after recovering from an illness which confined him to the Walter Reed Hospital, Washington.

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S. S. Selig, head of Selig Co., Atlanta, Ga., has just returned from a short trip to Paris.

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E. W. Bennett & Co., San Francisco, has introduced a new silver polish, advertising of which has been entrusted to Emil Brisacher & Staff. This agency also handles advertising on Bennett's "Brilliantshine" metal polish.

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McKesson & Robbins, Inc., reported a net profit from operations of only $1,432 for the six months ended June 30, 1932, comparing with $1,300,381 in the corresponding period of 1931.

CATTLE SPRAYS

THE chief use of insect sprays for cattle is on dairy cows. Their use in practical dairy operation has expanded very materially over the past few years. Their object is twofold, depending considerably on the attitude of the dairyman toward his stock. First, they kill off flies in the barns, and act as a repellant against further attacks of flies and other insects, thereby making the cattle more comfortable and freeing them from the annoyance of constant insect attack. Second, they may tend to increase milk production by warding off insect annoyance and the discomfort and possible infection of insect bites.

Most everything in the nature of petroleum base products have been sold at one time or another for use as cattle sprays. Ordinary crude oil, light lubricating grades of petroleum, and even crank case oil have been recommended and used in various forms. Some sprays have contained other products of real or doubtful merit. Products with too light a petroleum base have caused "burning." Others with too heavy a base have been effective in greasing up the cows and the barn with little other results. It was with the advent of the use of pyrethrum and pine oil in cattle sprays along with the correct type petroleum base that really effective sprays were developed.

Considerable research has been conducted in cattle sprays over the past seven or eight years at the University of California by Prof. S. B. Freeborn, Prof. W. M. Regan, and Prof. A. H. Folger. Their findings have been published from time to time in the "Journal of Economic Entomology." Work has also been carried on by various divisions of the U. S. Department of Agriculture and others. Results of some of the work of Freeborn and Regan, published earlier this year, was with three different types of sprays. They tried a white oil with 100% unsulfonated residue of 105 seconds Saybolt viscosity, a mixture of two parts of this white oil with one of a regular pyrethrum household spray, and a three per cent dilution of an emulsion composed of creosote and pine tar emulsified with caustic soda.

The experiments of Freeborn and Regan indicated that infestations of house flies or horn flies had no appreciable effect on increase or decrease of milk production by dairy cows. They also found that stable flies in numbers in excess of 10,000 per cow produce a loss of approximately nine per cent, but the application of any of the fly sprays mentioned increases the loss from stable fly infestation and produces a definite loss in cows held as controls without flies or infested with house or horn flies. They stated that the present tendency in fly sprays is to use a petroleum oil base to which is added pyrethrum or pine oil or both. The repellent, and to some extent toxic action, of the pyrethrum and pine oil increases the efficiency of the oil and decreases the amount that is necessary to apply. In many cases commercial household spray is added to a base of heavier oil for the purpose of avoiding the burning or irritating action that would follow its use undiluted. Many claims have been made for the relative values of the unsaturates versus completely saturated oils, heavy versus light oils, and wide blends versus straight cuts or close blends.

Results of trials with 20 cc of spray per cow applied in the barn showed approximately the same efficiency for the first hour. Twenty cc is about a complete coverage of a thousand pound cow with a very light spray. Each fly alighting and remaining on the animal during the first hour was considered a positive. On each succeeding day the same animals were observed before spraying and the data obtained denoting the efficiency at the end of twenty-four hours. At the end of 24 hours the straight cut oil with pyrethrum had lost all of its efficiency as had the crude blend spray containing pyrethrum and pine oil but the medium blend had retained nearly one-third its efficiency. This is attributed to the pine oil bound in its oil base. The crude blend contained only 2 per cent pine oil for this test. For the ensuing trials it was increased to 4 per cent.

In the second set of trials, an attempt was made by applying an unusually large amount of spray (80 cc) to protect the animals over a period of five hours. Readings were made at the end of each hour after spraying. The straight cut with pyrethrum had lost more of its efficiency proportionally than had the two blends containing pine oil.

In the third trial, the animals were confined in an open corral without shelter from wind or sun and sprayed with 40 cc each. Observations were made each hour. A comparison with the 80 cc column shows that the relatively heavy oil with pyrethrum (straight cut) was nearly as effective in amounts of only 40 cc at the end of five hours as it was with an 80 cc application. On the other hand, the medium and crude blends containing pine oil lost approximately 20 per cent of their efficiency when the dosage was reduced 50 per cent. This finding tends to substantiate laboratory tests showing that pine oil acts independently of the oil carriers, whereas the pyrethrum combines actively with the oil. The loss for eight hours merely accentuates the facts shown by the efficiency at five hours.

It is difficult to draw definite conclusions but it is safe to assume that pine oil adds to the effectiveness

as a repellent particularly after the first hour; that it exercises its activity qualitatively and quantitatively as an agent independent of its oil carriers, that uniform distillation curves are desirable, and that the heavier bodied oils are superior to the lighter ones as carriers with the reservations noted below.

The question of repellent action is only half the picture however. Fully as important as the efficacy in repelling flies is the effect of the spray on the cow. The sulfonated residues or unsaturates in petroleum oils are themselves rather potent fly repellents but their inclusion is fraught with danger to the cows. In the same way household spray with its carrier of low boiling point is very effective for a short time, but on account of its low viscosity and high penetration it is dangerous to the cows.

CHARACTERISTICS of the oil are extremely important from the standpoint of the welfare of the cows. A viscosity of 38 seconds was toxic even though the unsulfonated residue was nearly 100 per cent. On the other hand, an oil with a viscosity of 70 seconds was toxic in connection with a 90 per cent unsulfonated residue and safe with a 100 per cent unsulfonated residue. With a 100 per cent unsulfonated residue it is safe to go as high as 105 seconds viscosity providing excessive amounts are not used. In other words, an oil with a viscosity below 40 seconds is apt to burn the cow and one above 65 seconds may also burn if the unsulfonated residue is much below 90 per cent. The natural inference is that the oil of the higher viscosity holds the unsaturates on the body of the animal long enough to produce toxic effects while one of a lower viscosity, such as 50 seconds, allows for the volatilization of the unsaturates before serious damage is produced.

In this connection it must be borne in mind that a wide blend made of a very light and a very heavy oil may give a viscosity reading within the safe range (40-65) but with the rapid volatilization of the lighter fraction, the residual oil left on the cow may have a much higher viscosity than the original blend in which case any percentage of unsaturates might prove dangerous. After all is said, however, the matter of application itself becomes of extreme importance. With a careful, uniform application where the spray does *not wet* the animal's skin but hangs in the hair, a mixture that violates all the precepts mentioned above, such as our crude cut blend, can be applied without injury. In the hands of the average milker, however, sprays of this type are fraught with danger.

On the basis of observations of the trials, Freeborn and Regan advanced the tentative assumptions that oil sprays exercise an effect on the skin of the cows that interferes with the cooling function of the skin. If this cooling function is hampered by the application of oil sprays the respiratory cooling apparatus is not adequate to maintain the normal body temperature and fever results. After each spray trial the animals were washed thoroughly with soap and water but in spite of this precaution the temperature rose again. This indicated that the oil produces a definite physiological effect on the skin which impairs its ability to aid in maintaining the body temperature.

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Antioxidants for Pyrethrum

The deterioration of pyrethrum and the loss of active principle, that is pyrethrins, are effectively controlled by the addition of substances which prevent oxidation. Only small quantities of these antioxidants need be used, such as pyrocatechol, resorcinol, hydroquinone, pyrogallol and tannic acid, according to F. Tattersfield and J. T. Martin of the Laboratory for Insecticides and Fungicides of the Rothamsted Experimental Station, England. Phenol and phloroglucinol, however, do not give as good results. Oxidation is accelerated by light. The authors are also interested in the cultivation of the pyrethrum plant in England. They point out that the pyrethrin content of the flower heads depends on the plant, and that there is some evidence that cuttings from high yielding plants will in turn produce high pyrethrin yields, though whether this property is transmissible by breeding is not yet certain. They also state that the experiments carried out in England on the cultivation of the plant are proving distinctly promising. Excellent products were obtained from a very poor sandy soil. The manurial treatments so far tried have not markedly affected either yield or toxic quality of the flowers. The authors have also examined many plants indigent to tropical countries and containing rotenone. Analysis of various samples of derris root showed a variation of rotenone content from 1 to 6 per cent. A sample of cube from Peru contained 6.4 per cent. Other plants possessing insecticidal properties were examined including mundulea suberosa from India, and neorautanenia fisfolia from Southern Rhodesia, but they were found to be less effective than the derris and haiari groups.

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Saponaceous insecticides are made from ammonia, amine or alkali metal soaps containing at least 5 per cent of true sulfonic acids or their water soluble salts, or fatty acid esters in which the sulfonic group is contained in the alcohol component. The esters of the acids of animal and vegetable fats and oils are specified in proportions varying from 10 to 1,000 per cent of the weight of the soap. Various insecticidal substances are added. An example of a cleansing composition contains 80 pounds of neutral sodium salt of the condensation product of oleic acid chloride with isothionic acid, 15 pounds of sodium palmitate and 5 pounds of sodium perborate. I. G. Farbenidustrie A.G., Frankfurt-am-Main, Germany. British Patent No. 359,893.

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Ertel Engineering Co., manufacturers of portable mixers, filters, valves, etc., has moved to 108 E. 16th Street, New York.

Thallium Sulfate As a Rodent Poison

TODAY, thallium sulfate is finding a widening use as a rodent poison. Yesterday, it was a comparatively unknown product among professional exterminators and manufacturers of raticides. From the practical manufacturing and exterminating angle, the product is new. Its use has expanded very slowly, owing chiefly to its extremely poisonous nature and high price. Even though it has several advantages over other rat poisons, the fear of an unknown poisonous product has tended to hold it back.

Its superiority over barium carbonate is its stability. It will last indefinitely when mixed with the bait and will not deteriorate in any way. When compared to strychnine and phosphorus by its advocates, it is pointed out as being tasteless, odorless, and devoid of any fire hazard. Its action is stated to be cumulative, slow but sure. The rodents are given plenty of opportunity to leave the premises before they die, if they are so inclined.

The widest use of thallium sulfate in raticides has been in the form of poisoned grain, the so-called "rat seeds" and "mouse seeds." The advantage in these products is the absence of taste or odor and the fact that the grain,—barley, oats, or wheat,—can be treated with a comparatively small amount of the poison and be effective. About one per cent of thallium salt suffices. One pound of thallium sulfate to one hundred pounds of bait, or one ounce to five pounds, is the usual proportion.

FOR making up baits in comparatively small quantities, the following procedure is recommended: Dissolve a quarter of an ounce of thallium sulfate in a large cup of water and bring it to a boil. Then add one-half cup of corn syrup, 12 ounces of corn starch or bacon and a few drops of glycerine. Warm this mixture and stir well. Then spread over thinly sliced bread evenly, pressing it in well. This mixture when spread should cover two ordinary loaves of bread sliced thin. The prepared slices when spread should be cut into small squares and placed around in tablespoon lots. Care should be taken to place it in places where it will not be picked up by pet animals or children. The most noticeable results in the exterminating job will be seen in about three days.

Another type of bait for ground squirrels, rats, mice, etc., is made up as follows: 125 pounds of hulled barley, oats or wheat is mixed with 1½ pounds of thallium sulfate. The thallium is dissolved in six quartz of boiling water and to this is added ½ pound of dry starch to which a little cold water has been mixed previously. The clear starch paste thus made is boiled two or three minutes. Then ½ pint of glycerine is added and the whole boiled for a few minutes more. This syrupy mass is then mixed thoroughly with the grain and the bait is placed around in tablespoon quantities.

For preparing a poison seed for mice, one ounce of thallium sulfate is dissolved in a quart of boiling water. One hundred ounces of ordinary bird seed are soaked in this mixture, the excess liquid drained off and the seeds allowed to dry well. A small quantity of anise oil is then added and the seed thoroughly mixed.

THALLIUM sulfate has also found some use as an ant poison. It acts as a slow cumulative poison and where a supply of bait is continuously available, an entire colony can be readily destroyed. For red ants, the following mixture is especially recommended: Mix 1 pint of water with one pound of sugar and three ounces of honey. Add 25 grains of thallium sulfate, bring to a boil and stir vigorously. Place this syrup near the infested places. It is stated that with this mixture, the pavement ant is even more readily controlled than the red ant.

Because thallium sulfate is so deadly poisonous, the antidote should be given particular attention where it is used or on packages of any product containing it. The most effective method, of course, of combating this poison is the same as in many others,—evacuate the contents of the victim's stomach *immediately*. Use an emetic such as a tablespoon of mustard in a glass of water, or lacking this, insert finger in back of throat and make the victim vomit until the stomach is empty. Of course, a physician or ambulance should be called first and other emergency measures as enumerated above taken pending arrival.

The use of thallium sulfate has been restricted in the past by its high price. However, the cost of the material has come down sharply during the past year. This may tend to bring about a further expansion in its use. However, all manufacturers and exterminators who use it should be certain that it is surrounded with the same precautions as in the case of other poisons, such as the arsenicals, strychnine, and the like.

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Whelan Drug Co., whose name was changed a few weeks ago to Retail Chemists Corp., has filed a voluntary petition in bankruptcy in the Federal Court for the Southern District of New York, listing liabilities of $10,635,000 and assets of $5,613,465.

Perfumes For

PARADICHLORBENZENE

Individual odors to meet every fancy. . . . At prices which will appeal to the buyer who is anxious to keep his production costs low . . . and still supply well perfumed deodorant crystals and blocks.

The following have proven extremely popular:

	Lb.		Lb.
American Thistle No. 1010.	$2.25	Rose No. 310	$2.50
American Thistle No. 180.	5.00	Rose Heavy No. 99	5.00
Forest Bouquet No. 42	4.00	Trefle No. 619	2.85
Carnation No. 50	5.00	Trefle No. 157	6.00
New Mown Hay No. 319.	2.75	Violet No. 611	3.10
New Mown Hay No. 75	5.00	Wild Flower No. 5300.	1.75
Oriental No. 88	5.00	Wild Flower No. 113	5.00

In addition to the odors listed we also have many others ranging in price from $1.25 to $8.00 lb.

Guaranteed not to decompose or change in odor, no matter how long they remain in contact with the chemical.

All of our Paradichlorbenzene odors are supplied with or without color.

Used one pound to one hundred pounds of crystals.

P. R. DREYER INC.

12 East 12th Street New York

"Its the Odor that Sells the Product"

New Specifications for Sweeping Compound

A NEW proposed specification for sweeping compounds has been issued by the Federal Specifications Board of the Bureau of Standards. The new specifications which cover two types of sweeping compounds, namely, mineral oil compound and water-wax emulsion compound, have been issued to replace the previously proposed specification. (See *Soap*, p. 97, March, 1932.) The newest proposed specifications differ materially from those originally proposed by the Federal Specifications Board. Comments or criticism from the trade will receive the consideration of the Board before these specifications are officially adopted. The following tentative draft should be examined carefully and any suggested revisions should be sent at once to F. W. Smither, Technical Committee on Miscellaneous Chemical Products, Federal Specifications Board, Washington, D. C.

Proposed Federal Specification for Compound, Sweeping

A. APPLICABLE FEDERAL SPECIFICATIONS

A.-1. There are no other Federal Specifications applicable to this specification.

A.-2. Any special requirements of the individual departments of the Government are noted under Section H.

B. TYPES

B-1. Sweeping compound shall be of the following types, as specified:

Type A—Mineral oil compound
Type B—Water-wax emulsion compound

C. MATERIAL

C-1. Sweeping compound shall be made of uniformly fine and high-grade materials, shall be satisfactory for the purpose intended, and shall be as specified hereinafter for each type.

D. GENERAL REQUIREMENTS

D-1. Sweeping compound shall consist of a uniform mixture of the materials hereinafter specified for each type.

E. DETAIL REQUIREMENTS

E-1. Type A—Mineral Oil Compound.

E-1-a. *Odor.*—Shall not be objectionable. If desired shall conform to the odor of a sample mutually agreed upon by buyer and seller. The mutually agreed upon sample shall be kept in an air-tight, closed container for comparison with samples from deliveries. (See paragraphs 1-3 and 1-4).

E-1-b. *Non-Staining.*—The material shall not stain flooring surfaces on which it may be used. (See paragraph 1-5).

E-1-c. *Test for Flammable Vapors.*—The material shall not give off flammable vapors when tested according to Section F-2-b. Material not meeting the test for flammable vapors will be rejected without further test.

E-1-d. *Water (Matter Volatile at* 105-110°*C).*—Shall be not more than 10 per cent by weight.

E-1-e. *Refined Heavy Mineral Oil (such as Paraffin Oil).*—Shall be not less than 15 per cent and not more than 20 per cent by weight.

E-1-f. *Clean, Fine, Sharp Sand or Feldspar Sand.*—Shall be not less than 35 per cent and not more than 50 per cent by weight.

E-1-g. Fatty oils shall not be present.

E-1-h. The remainder shall be finely ground sawdust.

E-2. Type B—Water-Wax Emulsion Compound.

E-2-a. *Odor.*—Shall not be objectionable. If desired shall conform to the odor of a sample mutually agreed upon by buyer and seller. The mutually agreed upon sample shall be kept in an air-tight, closed container for comparison with samples from deliveries. (See paragraphs 1-3 and 1-4).

E-2-b. *Non-Staining.*—The material shall not stain flooring surfaces on which it may be used. (See paragraph 1-5).

E-2-c. *Test for Flammable Vapors.*—The material shall not give off flammable vapors when tested according to Section F-2-b. Material not meeting the test for flammable vapors will be rejected without further test.

E-2-d. *Water (Matter Volatile at* 105-110° *C).*—Shall be not more than 20 per cent by weight.

E-2-e. *Clean, Fine, Sharp Sand or Feldspar Sand.*—Shall be not less than 60 per cent and not more than 70 per cent by weight.

E-2-f. *Finely Ground Sawdust.*—Shall be not less than 5 per cent and not more than 10 per cent by weight.

E-2-g. The remainder shall be waxes and emulsifying agent.

F. METHODS OF SAMPLING, INSPECTION, AND TESTS.

F-1. *Sampling.*—Not less than 1 pound taken at random from each 1,000 pounds or less of any delivery shall constitute a sample. The samples shall be taken from the containers in such a manner as to obtain a representative sample of the entire contents. The inspector shall rapidly mix the sample, place in an air-tight container, which shall be filled, seal, mark, date, and send to the laboratory for test. Samples should be kept cool until tested. The seller shall have the option of being represented at the time of sampling, and when he so requests shall be furnished with a duplicate sample.

F-2. *Testing.*—

F-2-a. *Preparation of Sample.*—Note the color, odor, and condition of the sample. Rapidly mix the sample; if desired, quarter down to about 1 pound. Weigh out all portions for analysis at once. Unused portions of the sample used for analysis shall be preserved in an air-tight container in a cool place.

F-2-b. *Test for Flammable Vapors.*—Place about 50 grams of the sample in a wide-mouthed (salt mouth), glass bottle of approximately one pint capacity; stopper the bottle with a new, tight-fitting cork which carries a glass tube connected with a Bunsen valve*, and suspend it in an air bath or a water bath at room temperature. Suspend a thermometer in the center of the bath. Heat the bath so that the temperature gradually rises to 60°C (140°F); then maintain the temperature at 60° to 66°C (140° to 150.8°F) for three hours. Remove the stopper and introduce the test flame; if the vapors flash or burn the sample does not meet the specification. If the vapors do not flash or burn, discontinue the test and report the sample as passing the test for flammable vapors. As a test flame an ordinary blow-pipe attached to a gas tube may be used.

F-2-c. *Determination of Matter Volatile at* 105-110°*C.*—Place 5 grams of sample in a tared weighing bottle and heat with

* A Bunsen valve consists of a short piece of rubber tubing with a slit along a few centimeters of one side, and the outer end of the rubber tubing is closed by a glass rod. This valve prevents the entrance of air from without.

stopper removed for 2 hours at a temperature of 105-110°C. Insert stopper, cool, and weigh. Calculate loss in weight as volatile matter.

F-2-d. *Determination of Heavy Mineral Oil.*—Extract thoroughly the sample used for determination of moisture content with ether or other suitable solvent and transfer this solution into a weighed crystallizing dish. Evaporate the volatile matter first on steam bath, then dry at 105°C for one hour, and weigh crystallizing dish with residue. Calculate weight of residue as heavy mineral oil.

F-2-e. *Determination of Sand.*—Place 5 grams of sample in a weighed (tared) porcelain crucible, ash to constant weight, cool, and weigh crucible with residue. Calculate weight of residue as sand. Examine under a magnifying glass to determine whether particles are sharp or angular.

F-2-f. *Determination of Sawdust in Type A.*—The sum of the percentages of matter volatile at 105°-110°C, heavy mineral oil, and sand subtracted from 100 is reported as sawdust.

F-2-g. *Determination of Sawdust in Type B.*—Dry 5 grams of the sample at 105-110°C to expel water and other volatile matter; cool, digest the dried residue with chloroform (on a steam bath), filter on a tared filter paper and wash with hot chloroform. Transfer paper and residue to a tared weighing bottle, dry at 105-110°C for one hour, insert stopper in weighing bottle, cool and weigh. Calculate the weight of the residue. Transfer paper and residue to a weighed porcelain crucible, ignite until organic matter (paper and sawdust) is consumed. Cool and weigh. Calculate the weight of the residue. The difference between this weight and the weight of the residue before ignition shall be considered as the weight of the sawdust. Calculate to percentage.

F-2-h. *Wax (and Emulsifying Agent) in Type B.*—The sum of the percentages of matter volatile at 105-110°C, sand, and sawdust subtracted from 100 is reported as waxes, etc.

F-2-i. *Test for Fatty Oil in Type A.—Qualitative Test.*—Dry about 50 grams of the sample at 105-110°C to expel water and other volatile matter, cool, digest the dried material with ether, and evaporate the ether solution on the steam bath to expel the ether; then heat the oil at 105-110°C for about 30 minutes. Heat 4 to 5 ml of this oil in a test tube with a piece of caustic soda (solid) for 15 minutes at a temperature of 230° to 250°C. Allow to cool. The presence of fatty oil is indicated by the gelatinization, complete or partial, of the contents of the tube. Material conforming to the specification is free from fatty oil.

G. PACKAGING, PACKING AND MARKING.

G-1. *Packaging and Packing.*—Sweeping compound shall be delivered in well-coopered wooden barrels, with properly secured heads, containing about 200 pounds.

G-2. *Marking.*—Unless otherwise specified, shipping containers shall be marked with the name of the material and the quantity contained therein, as defined by the contract or order under which the shipment is made, the name of the contractor, and the number of the contract or order.

G-3. Any special requirements of the individual departments are noted under Section H.

H. REQUIREMENTS APPLICABLE TO INDIVIDUAL DEPARTMENTS.

H-1. The following departmental specifications of the issue in effect on date of invitation for bids shall respectively form a part of this specification.

H-1-a Army: United States Army Specification No. 100-2, Standard Specification for Marking Shipments.

H-1-b (1). Navy Department General Specifications for Inspection of Material (copies of which may be obtained without cost upon application to the Bureau of Supplies and Accounts, Navy Department, Washington, D. C.).

H-1-c. Marine Corps: Instructions issued by the Quartermaster.

I. NOTES.

I-1. Purchasers should specify the type required.

I-2. *Basis of Purchase.*—Sweeping compound of each type shall be purchased by net weight. Sweeping compound is subject to a possible gain or loss of weight, depending upon packaging, atmospheric and/or storage conditions. Therefore the time of computing net weight with reference to acceptance or delivery should be specified in the contract or order.

I-3. Purchasers should specify if a mutually agreed upon sample is desired for comparison with deliveries for odor. See Section E-1-a.

I-4. The inspector or purchasing officer shall determine whether or not the material is satisfactory as regards odor. If unsatisfactory the material should be rejected and not submitted to the testing laboratory for the tests given under Section F-2.

I-5. The inspector or purchasing officer shall determine whether or not the material is satisfactory as regards the non-staining of floor surfaces. If unsatisfactory the material should be rejected and not submitted to the testing laboratory for the tests given under Section F-2.

I-6. It is believed that this specification adequately describes the characteristics necessary to secure the desired material, and that normally no samples will be necessary prior to award to determine compliance with this specification. If, for any particular purpose, samples with bids are necessary, they should be specifically asked for in the invitation for bids, and the particular purpose to be served by the bid samples should be definitely stated, the specification to apply in all other respects.

I-7. This specification governs all United States Government purchases of this commodity. Users are requested to retain this specification in permanent file until a revision is issued.

I-8. Interested parties are advised that an Alphabetical Index of Federal Specifications may be purchased as noted in the paragraph next below, price to be obtained from the Superintendent of Documents.

I-9. Copies of this specification may be obtained upon application, accompanied by money order or coupon, or cash, to Superintendent of Documents, Government Printing Office, Washington, D. C.

Notice: When Government drawings, specifications, or other data are used for any Government procurement operation, the United States Government thereby incurs no responsibility or any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

—o—

Estimate 1932 Pyrethrum Crop

The 1931 Japanese pyrethrum crop amounted to 12,320,000 pounds. It is estimated by producers that the 1932 crop will be about 16,000,000 pounds, while dealers think it will be not over 13,000,000 pounds. The carryover from the 1931 crop was estimated on March 31, 1932, at 3,600,000 pounds. On July 15, 1932, there were no stocks available for export. Shipments of pyrethrum flowers from Kobe during the first six months of 1932 amounted to 3,156,664 pounds valued at $290,637, an increase of 2,043,384 pounds and $148,955. when compared with the first six months of 1931. On July 7, 1932, the Hokkaido Agricultural Inspection Bureau of the Hokkaido Government undertook to estimate for the first time the seasonal crop of pyrethrum flowers in the Hokkaido growing districts. It is understood that these estimates will be made at least three times during the year.

—o—

Continental Can Company plans an expenditure of $230,000 over the next few months on improvements at its Clearing, Illinois, plant, most of which will be for new equipment. This work, originally contemplated for some time in the future, was approved for immediate completion in order to provide additional employment during the coming months.

Insecticide and Disinfectant Annual Meeting Dec. 12-13

THE Nineteenth Annual Meeting of the National Association of Insecticide & Disinfectant Manufacturers will be held on Monday and Tuesday, December 12 and 13 at the Hotel New Yorker, New York, according to an announcement by President Evans E. A. Stone at the close of the regular fall meeting of the Board of Governors of the Association at The New Yorker on Sept. 13. The annual convention will extend for two days, preceded by a meeting of the Board and Committees on Sunday, Dec. 11. The regular annual banquet will be held on Tuesday evening, Dec. 13 at the close of the convention. There will be the usual informal dinner with a floor show. The cost of convention registration including tickets for daily luncheons and the banquet will be fifteen dollars per person as heretofore. W. J. Andree of Sinclair Refining Co. is chairman of the program committee and Harry W. Cole of Baird & McGuire, Inc., is chairman of the general convention committee. Entertainment will be in charge of Grant A. Dorland. A proposed plan to hold an exhibition in connection with the annual meeting this year was voted down by the Board.

At a meeting of the Board in New York, the following were elected to membership in the Association: Standard Oil Co. of New York, Dethol Manufacturing Co. of Baltimore, Pepsodent Company of Chicago. A proposed change in the by-laws of the Association was taken up and will be placed before the membership at the annual meeting in December to change the number of members of the Board to fifteen, including the officers, the ten board members to be elected annually. This is to eliminate the automatic election of past presidents to the board as is now provided.

A report to the Board meeting by John Powell of John Powell & Co., treasurer, showed the Association to be well within its budgeted expenditures thus far in 1932. He reported the Association to be in an excellent financial condition. A new emblem which is approximately the same as the old emblem of the Association was adopted tentatively by the Board in keeping with the recently changed name of the organization.

—o—

Concentrated Pyrethrum Extract

Details are given on a method for making concentrated pyrethrum extract with the aid of ethylene dichloride. This solvent is stated to be superior to others in dissolving only a small amount of the other parts of the flower in addition to the pyrethrins, in being soluble in kerosene and in possessing no greater toxicity than gasoline to workers in the plant. It is very stable and its boiling point is low enough to allow recovery of the pyrethrin without decomposition due to too high temperature. Its cost is low.

Extraction is carried out below 40 degrees C to avoid decomposition of the pyrethrins. The efficiency is high as the extracted residue contains only 0.02 per cent pyrethrins, indicating 97 to 98 per cent extraction. Experiments were also made on the effect of distillation on the toxicity of the ethylene dichloride extract. Little or no loss of toxicity was experienced in heating the extract to temperatures ranging from 26 to 98 degrees C. The ethylene dichloride extract, mixed with kerosene, was tested for toxicity in comparison with the direct kerosene extract of the flowers. There was no difference. The effect of storage on the toxicity of pyrethrum extracts in tin cans was nil. C. B. Gnadinger and C. S. Corl. *Industrial & Engineering Chemistry*, 1932, pages 988-991.

—o—

Hydrogenated Insecticide Base

While various petroleum distillates have been widely used as a base for fly sprays, it is claimed by the I. G. Farbenindustrie A. G. in German Patent No. 555,117 that the strong odors are a decided disadvantage which cannot be overcome even by the addition of potent perfume bouquets. This difficulty, they claim, is eliminated by the use of partially or completely hydrogenated petroleum. These products are stated to be odorless and vaporize rapidly without leaving a residue on furniture or other articles. The insecticide or fly spray may be made by dissolving 0.5 part of pyrethrum extract as well as 3.5 parts of amyl salicylate in 95 parts of hydrogenated petroleum of 182 to 292 degrees C boiling point. Another example involves the use of 0.4 part of derris extract and 10 parts of diphenyl ether dissolved in hydrogenated petroleum.

—o—

The Refinery Supply Co. with branches in Dallas, Texas and Tulsa, Oklahoma has been appointed sales representative in the mid-continent field by Glyco Products Co., Bush Terminal, Brooklyn. The Refinery Supply Co. will specialize on special emulsifying agents and synthetic resins and waxes.

—o—

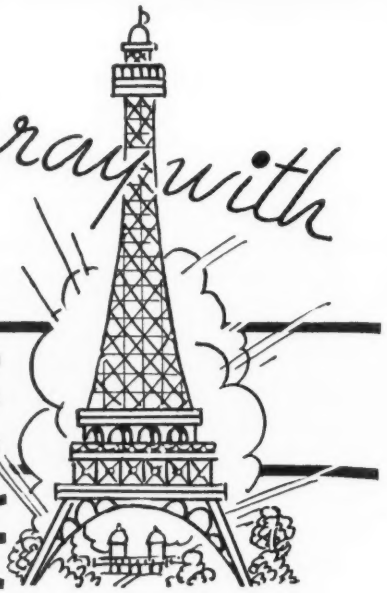
General Naval Stores Co., New York, advises that the H. T. West Company Chelsea, Boston, Mass., no longer represent the company in New England. The new representative there will be Mulcahy & Griffin, 141 Milk St., Boston.

Perfume your fly spray with

the **NEW**

KEREX CHERIE

KEREX FLEURIE



Two Perfume Oils French in character—

Exclusive in quality—distinctive in odor

—and reasonable in price.

Samples and quotations on request.

★

FELTON CHEMICAL CO., Inc.

Executive Offices and Factory

599 JOHNSON AVE., BROOKLYN, N. Y.

Chicago, Ill., Office

1200 NORTH ASHLAND AVE.

Stocks Carried in the Following Cities:

LOS ANGELES, CAL.	SAN FRANCISCO, CAL.	CHICAGO, ILL.	NEW ORLEANS, LA.
WM. PAUER.	P. J. RICH.	M. HARTSTEIN.	ROBERT E. FELTON.
1131 N. Orange Grove Ave.	1282 Folsom St.	1200 No. Ashland Ave.	Balter Bldg., Rm. 407.

Say you saw it in SOAP!

Suggests Derris Against Warble Fly

A report has recently been issued on the results of the British Warble Fly Extermination Campaign for the year 1931, a copy of which is available through the U. S. Department of Commerce. In treatment of warble-infected cattle a derris-soap wash was recommended by the Leathersellers' Company's Warble Fly Committee made up of the following ingredients: one pound powdered derris root, one-quarter pound soft soap and one gallon water. Tests showed this to be an efficient and practical remedy, and excellent results were also obtained even when only half this quantity of derris root was used. The dressings are applied four times a season. Where a small number of cattle or slightly infested cattle were to be treated it was found practically as satisfactory to use merely powdered derris.

—o—

Rosin Stocks and Receipts Decline

The following figures give the latest gum rosin statistics covering receipts and stocks at Savannah, Jacksonville and Pensacola, as reported by the *Savannah Weekly Naval Stores Review*. Figures indicate barrels.

	Receipts April 1 to Sept. 15	Stocks Sept. 15
1932	499,014	373,217
1931	726,951	458,377
1930	787,496	267,626

These figures indicate that this year's reduced crop has been absorbed and that stocks have been cut by 85,000 barrels.

—o—

Dunning Post Cards Under Ban

The United States Post Office Department has issued a warning dealing with the use of postal cards to collect debts, a practice which has been resorted to frequently during the last few weeks by persons seeking to avoid payment of the new three-cent rate on first class postage. It is pointed out by the Department that it is unlawful to use postal cards in requesting payments of overdue accounts or to carry any other messages that might reflect on the character or conduct of the addressee. Penalties up to $5,000 fine or five years' imprisonment are provided for violations. The law does not forbid mailing cards which request settlement of current accounts, but positively bans use of cards giving notice of past due balances or threatening suit.

—o—

The Cincinnati Mailing Device Company, manufacturers of cylindrical containers and tubes, is now offering a complete packaging service to packers of all kinds of dry commodities. This new service includes the development of proper containers for each individual requirement, the designs of individual labels appropriate for the products packed in the containers, the printing and application of the labels and the packaging of the containers in reshippers.

Discusses Tax on Free Goods

In a bulletin of September 30 to the membership of the National Association of Insecticide & Disinfectant Manufacturers, Secretary Harry W. Cole discusses the subject of the excise tax on free goods in the light of recent government rulings. The bulletin states in part:

"A recent Internal Revenue Bulletin contains a ruling brought about by the question of the taxability of free goods under the Revenue Act of 1932. It is held that the transaction is not a gift of any portion of the goods but is merely a reduction in the regular price charged for the entire lot.

"The ruling, which is XI-36-5669, S. T. 484, is in full as follows:

"SECTION 619—SALE PRICE

"Regulations 46, Article —: Basis of tax on sales generally. XI-36-5669, S. T. 484.

> "Where a manufacturer bills goods at his regular price and in addition ships certain quantities of the same goods 'free,' held that the transaction is not a gift of any portion of the goods but is merely a reduction in the regular price charged for the entire lot.

"Advice is requested relative to the application of section 603 of the Revenue Act of 1932 to so-called 'free goods' delivered by manufacturers and in certain instances delivered by jobbers from tax-paid stock.

"It is held that where a manufacturer bills goods at his regular price and in addition ships certain quantities of the same goods 'free' the transaction is not a gift of any portion of the goods but is merely a reduction in the regular price charged for the entire lot. Assuming that this is a sale at wholesale, the tax will attach to the price actually charged for the entire shipment.

"Inquiry is also made relative to the liability incurred where a manufacturer sells goods at his regular wholesale price and pays tax on such sales, but thereafter authorizes the purchaser to offer 'free' a given quantity of such merchandise in cases where orders are received for a stated quantity. It is understood that upon authorizing the jobber to make such an offer the manufacturer agrees to credit the jobber with that portion of the original purchase price which applies to any goods delivered 'free' on such an offer.

"Section 621 (a) 2 of the Revenue Act of 1932 provides in part that a credit or refund may be allowed or made to any person who has paid tax under Title IV with respect to an article, when the price on which the tax was based is readjusted by a bona fide discount, rebate, or allowance, in the amount of that part of the tax proportionate to the part of the price which is refunded or credited.

"In the event that the manufacturer allows the jobber a rebate for 'free goods,' on which tax has been paid, delivered by the jobber in connection with an offer sponsored by the manufacturer, the manufacturer is

To dispel confusion and reaffirm our forty-two year old policies,

We Respectfully Submit:

That, under no temptation do we buy merchandise off the auction block of drug firms discontinuing business. Botanicals so obtained too often are old, deteriorated and offer bad value at any price.

That, for the same reasons, we deliberately decline to buy the stocks of bankrupt concerns, which we could offer at prices far below the price of prime, sound merchandise. We deem it better business not to do so.

That, in nearly all foreign and domestic crude drugs there are from two to ten different grades and that current prices are low enough to use the best.

From our New York Warehouses and Drug Mills we offer a complete stock of foreign and domestic Botanical Crude Drugs, covering every article for which a commercial demand exists.

All merchandise we supply, coming to us from every corner of the world, is natural, true-to-name, and determined in our laboratories botanically, chemically and physiologically under professional supervision. This dispels all doubt as to quality.

The World's Best Drugs Our Chief Attraction

J. L. HOPKINS & CO.
NEW YORK

for *34* *years*

Makers of
Coal Tar Disinfectants
Stock Dips
Pine Oil Disinfectants
Insecticides
Polishes
Cleansers
Liquid Soaps
Spray Products
Roofing Cements

for the Wholesale and Jobbing Trades Only

INSECTICIDES

Prepare for the fall and winter business on household insecticides for use against bed bugs, roaches, silverfish, etc. Here are four products of unusual interest to the jobber and distributor at this season.

LIQUID INSECTICIDE
Sure death to bed bugs and roaches. Will not stain. Non-explosive.

PHENOL INSECTICIDE
Low cost. For use in rooming houses, jails, etc. Powerful.

PERFUMED INSECTICIDE
Especially for hotels, apartments, etc. Odor pleasant. Results sure.

ROACH POWDER
Effective 100% against ants, roaches, etc. Best obtainable.

Also best quality Fly Spray for immediate needs.

Send for samples, prices, etc., and a copy of our new folder containing full information.

CHEMICAL SUPPLY COMPANY
2450 Canal Road **Cleveland, O.**

Established 1898

Say you saw it in SOAP!

entitled to claim a credit on his tax return for the month in which the rebate is allowed, or in any succeeding month, for that part of the tax which is proportionate to that part of the price rebated."

—o—

Louis K. Liggett Co., in letters to its various landlords, has asked that rents on its drug stores be voluntarily reduced to lower levels to save the company from the necessity of reorganization. The company, controlled by Drug, Inc., has suffered severe losses in its real estate operations, and profits from store operation have disappeared.

—o—

"No Scale, No Sludge, No Mud—The application of Zeolite Water Softeners to the treatment of Boiler Feed Water" is the title of an interesting booklet just published by Permutit Company, 440 Fourth Avenue, New York. It is illustrated with photographs and diagrams and contains tabulated data, conversion tables, factors, reactions, etc. Copies may be obtained free upon request to the above company.

—o—

Pfaudler Co., Rochester, N. Y., is celebrating the fiftieth anniversary of its organization this year. The company, one of the leading manufacturers of glass-lined steel equipment, was founded in 1882 by James Sargent, C. C. Puffer and E. G. Miner.

Report on Private Brands

Two hundred and seventy-six chain store systems reporting private brand sales sold more than $750,000,000 worth of merchandise under their private labels in 1930, according to the latest report of the United States Federal Trade Commission. This represents an enormous increase in dollar volume and also shows an increase in the proportion of sales of private brand merchandise to total sales. Chains giving information on the amount of mark-up or gross profit on their private brands reported it to be equal or higher than on competing standard brands, while retail prices of private brands were said to be equal or less than those of competing standard brands. The trend of private brand business seems to be definitely upward, this being particularly apparent in chain drug, grocery and department stores.

—o—

C. C. Baird, president of Baird & McGuire, Inc., Holbrook, Mass., was recently presented with a past president's gold medal by the Randolph-Holbrook Rotary Club upon his retirement as president for the year 1931-32. Mr. Baird was one of the founders of the Randolph-Holbrook Club and has been an active Rotarian for many years.

—o—

Magnus, Mabee & Reynard, Inc., New York, has issued a new price list and catalog for September and October, 1932.

It May Be "THE SPRAYER!"

SUCCESS or failure in marketing Insecticide depend upon the sprayer used in application.

The Nu Day is the accepted standard: leakless, dripless, and will not syphon. Proportioned to produce the most effective break-up of insecticide.

Send for Catalog Illustrating Our Complete Line

LOWELL MANUFACTURING CO.

LOWELL MICHIGAN, U. S. A.

Say you saw it in SOAP!

VOGEL

A substantially constructed sprayer that will stand up under hard usage, priced at a remarkably low figure.

SPRAYERS

Regular hand type, also continuous. Sturdy, well designed. The greatest value for your money in sprayers.

CANS

Standard stock sizes for liquid insecticides and disinfectants. Plain or lithographed. A gross or a carload. The standard insecticide container.

Deodorizing Block Holders
Shaker Top Cans for Para

Plain stock types or specially lithographed

WILLIAM VOGEL & BROS., Inc.
37-47 South 9th St. **Brooklyn, N. Y.**

Barrett Standard CHEMICALS

for the SOAP and DISINFECTANT Industry

CRESYLIC ACIDS

CRESOLS

TAR ACID OILS

COAL-TAR SOLVENTS

Barrett Standard Chemicals are the result of more than 40 years of manufacturing experience. Constant improvement in methods has contributed to a reputation which is jealously guarded by the maintenance of exacting specifications. Before any Barrett Standard Chemical can be released for shipment it must pass rigid tests to assure its quality. It pays to standardize on Barrett Standard Chemicals.

The Barrett Company

40 Rector Street TRADE B MARK **New York, N. Y.**

Say you saw it in SOAP!

Lambert Co. paid a quarterly dividend of $1 a share on common stock, October 1, to stock of record September 17. This compares with regular dividend of $1 and a special dividend of $1 in the previous quarter.

—o—

James J. Kerrigan, vice-president of Merck & Co., spoke at the first fall meeting of the Drug, Chemical and Allied Trades section of the New York Board of Trade, held in the Drug & Chemical Club, New York, September 27.

—o—

In a recent issue of *Printers Ink* comment was made on the sales booklets of Dow Chemical Co., Midland, Mich., and the methods used by the company's advertising manager, William Stumpfig, to secure attractive attention-getting frontispieces.

—o—

Hafsoco Products Co., East Bloomfield, N. J., has been incorporated, with capitalization of $10,000, to manufacture soaps.

—o—

Steam & Combustion Co., Chicago, has issued a four-page folder describing its newly developed "Gas Fired Immersion Heaters" which are said to be used extensively in tanks for heating soda solutions and for heating liquids such as palm and linseed oils.

—o—

W. E. Drake has succeeded A. M. Hayes as secretary of Hynson, Westcott & Dunning, Baltimore.

Deny Registration of "Zit"

On the basis of opposition by Stanco, Inc., owners of the trademark "Flit," U. S. Patent Commissioner Kinnan has denied Bonide Chemical Co. the right to register the word "Zit" as a trademark for a stock spray preparation for spraying animals and birds to kill mites and other pests. The decision was based on the possibility of confusion to buyers, the law providing that where there is any reasonable chance of confusion the first registrant is to be granted full protection. Bonide Chemical Co. failed to furnish any testimony as to the use of the product or the trade name. Stanco, Inc., on the other hand, proved continuous use of "Flit" since May, 1923, and showed total sales since that date of a value of approximately $8,000,000.

—o—

Pneumatic Scale Corp., Quincy, Mass., has put on the market a new straight-line vacuum labeler. Bottle feeding, labeling and delivery are all performed as the containers pass along a straight 78" conveyor. Speeds from 40 to 80 per minute can be obtained, and the machine is adjustable for a variety of sizes and shapes of containers.

—o—

The team representing McCormick & Co. in the Baltimore Drug Trade Bowling League was in first place in league standing on September 28, with seven games won and only two lost.

The SPRAYER
Comes FIRST

It makes no difference how effective the insecticide or repellant may be, it MUST be correctly applied if the results are to be the BEST. The better the sprayer, the better the customer will like the product. That is the rule.

Acme Makes Sprayers to Fit Every Requirement

Over fifty years in the business has eliminated all risk and experiment in ACME products. The very height of perfection has been attained. Every sprayer carries a money-back guarantee of satisfaction. If it isn't in our regular line, we can build a sprayer to fit YOUR needs.

Our No. 200 sprayer is a leader. Special drip cup feature; air and spray tubes coordinated to produce a mist or fog that hangs in the air longer; special processed leather plunger, etc., etc. Tell us your needs. Write for samples and prices.

Potato Implement Company, Dept. 34
TRAVERSE CITY, MICHIGAN

Say you saw it in SOAP!

LIQUID SOAP PERFUMES

Odor does help sell soap. Increase the sale of yours by the use of Perfumes that sell on smell and hold that interest to the extent that repeat business is assured.

We Suggest:

Oil Colonial Bouquet	$6.00 lb.
Oil Rose "N"	4.00 "
Oil Cosmo Bouquet	6.00 "
Oil Lilas Blanc	4.50 "
Oil Tipton Bouquet	1.85 "
Oil Palma Bouquet	3.50 "

One pound to four to five hundred pounds of liquid soap is ample. Send for sample.

MAGNUS, MABEE & REYNARD, INC.

ESSENTIAL OILS

AROMATIC CHEMICALS
PERFUME SPECIALTIES

32 CLIFF ST.,
NEW YORK, N. Y.

HUDSON SPRAYERS *for* Correct Application

A good insecticide is at the mercy of the sprayer with which it is applied. A poor insecticide has little or nothing at stake in that regard.

There *is* a difference in sprayers. There *is* a difference, in the results obtained, between a correctly and an incorrectly designed machine.

The correct type of sprayer can't do much *for* or *against* a poor product. An incorrectly designed sprayer can give a meritorious product a mighty bad "break" . . . and usually does.

If that were not true, we could scrap our engineering department and testing laboratory. And you could forget about the biggest gamble in your business—the application of your product in the hands of Mrs. American Housewife!

It is important to remember that the formula for building Hudson Sprayers is largely the result of suggestions offered over a period of years by leading insecticide manufacturers of the country.

Our special representative will be glad to call and demonstrate the various types of sprayers in the Hudson Line.

H.D. HUDSON MANUFACTURING CO.

589 E. ILLINOIS ST.
CHICAGO, ILL.

New York City — Minneapolis, Minn. — Omaha
San Francisco — Philadelphia — Kansas City, Mo.

Say you saw it in SOAP!

Opportunities for Export

The following opportunities for export of American soaps and allied products have come to the Bureau of Foreign and Domestic Commerce, Washington, D. C. American manufacturers can secure the full details of the inquiries by communicating with the Bureau, care of the Department of Commerce. Be sure to mention the number of Foreign Trade Opportunity in writing.

†1209	Toothpaste in tubes	Straits Settlements	Agency or purchase
†1258	Disinfectants and insecticides	Canada	Agency
†1264	Disinfectants	Canada	Agency
*1279	Toilet soaps	India	Agency
†1344	Naphthalene	Canada	Agency or purchase
†1372	Insecticides	Canada	Purchase
†1382	Cresylic acid	Cuba	Agency
†1386	Toilet soaps	Philippines	Agency

—o—

Ellery W. Mann, head of Zonite Products Co., has accepted the chairmanship of the drug and pharmaceutical section of the emergency unemployment relief committee which will raise funds for the relief of the unemployed this winter.

—o—

E. A. Orem won low gross prize at the September tournament of the Chemical Salesmen's Association held at Maplewood Country Club, Maplewod, N. J., with a score of 91, with second prize tied between J. A. Alvarez and R. Brewer, each with 92. W. H. Adkins took low net with 107-34-73, F. S. Dubbs second, 102-28-74, and J. R. Eldridge, third, 101-26-75. Low gross for guests went to George Uhe who had an 84, C. C. Nowland taking low net with 84-23-71.

—o—

Hull Company, Brooklyn, has introduced a metal polish in powdered form which consists of silica and suitable emulsifying and stabilizing agents. It is sold in dry form, the user simply mixing the powder with water in the proper proportion to give a stable water-base metal polish.

—o—

Glyco Products Co., Brooklyn, has incorporated in booklet form all its recent news releases on emulsifying agents, synthetic waxes, resins, etc. Copies of the booklet containing a number of new emulsion formulae are available on request.

—o—

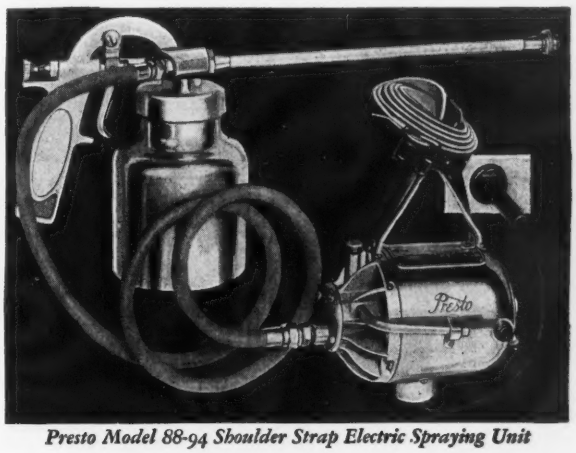
American Home Products Corp. earned a net profit of $1,448,512 during the first six months of 1932. This equalled $2.37 a share, as compared with earnings of $2.77 a share for the like period last year.

—o—

Synfleur Scientific Laboratories, Monticello, N. Y., has opened a New York office at 205 East 42nd street in charge of L. A. Barber.

—o—

The 1933 meeting of the American Drug Manufacturers' Association will be held in Hot Springs, Va., during the week of May 8.



Presto Model 88-94 Shoulder Strap Electric Spraying Unit

New- Presto *Model 88-94* *Shoulder Strap* Electric Spraying Unit

The powerful, effective spraying unit for all Insecticides—Disinfectants—Moth Killers—Deodorants

THIS new Presto Electric Spraying Unit is especially designed for the larger users—hospitals, industrial plants, dairies, poultry farms, packing plants, and similar places where quick, effective spraying is a necessity.

Two unit design includes *rotary compressor* of ample capacity carried on a shoulder strap—relieving the operator's hands of excessive weight. The Presto spray gun has a 12-inch extension nozzle, giving added reach and making inaccessible corners easy to cover. Convenient adjustment varies the spray instantly from heavy wet spray to a finely atomized mist that will float in the air. Any operating condition can be met, conveniently and economically.

Presto spraying equipment increases the sale of liquid disinfectants and insecticides of all kinds. Thousands of the famous Presto Model 102 spray guns are in use. Try a Presto spraying unit. You will find them far ahead of the ordinary types previously available. Recommend or furnish Presto equipment to your customers and earn an extra profit on increased sales of materials. The Presto plan is a proved business getter. Send the coupon now and get full information.

Presto Model 102 Spray Gun

METAL SPECIALTIES MFG. CO.
3200 Carroll Ave., at Kedzie Ave., Chicago, Ill.

Send full details of Presto Insecticide spray gun features and sales plans. We are interested in ☐ 88-94 large guns. ☐ 102 small guns.

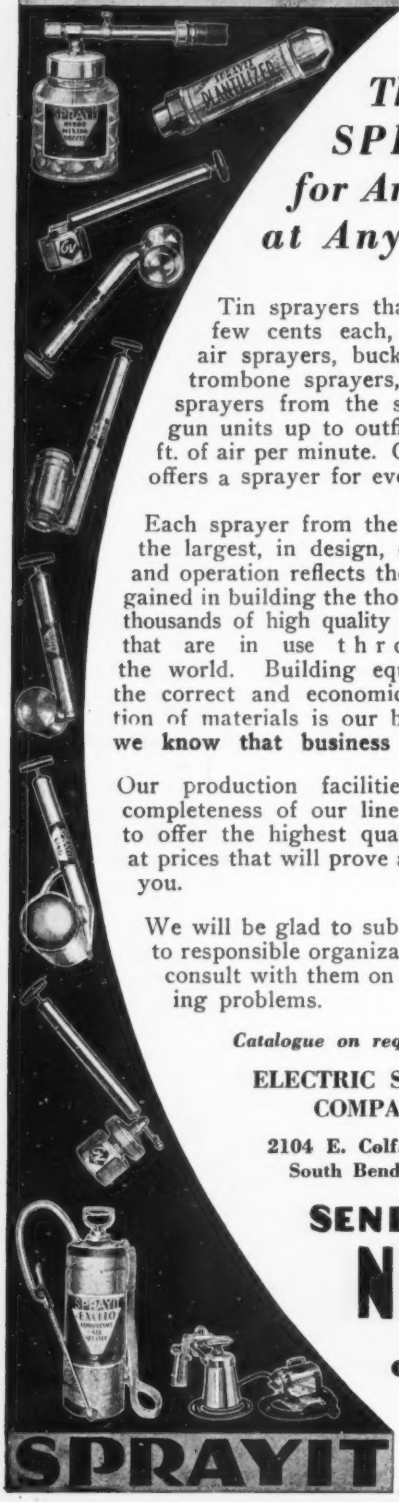
*Name*_____

*Address*_____

*City*_____ *State*_____

Say you saw it in SOAP!

COMPLETE LINE of SPRAYING EQUIPMENT



There's a SPRAYIT for Any Need at Any Price

Tin sprayers that sell for a few cents each, compressed air sprayers, bucket sprayers, trombone sprayers, electric sprayers from the smallest cup gun units up to outfits of 10 cu. ft. of air per minute. Only Sprayit offers a sprayer for every purpose.

Each sprayer from the smallest to the largest, in design, construction and operation reflects the experience gained in building the thousands upon thousands of high quality SPRAYITS that are in use throughout the world. Building equipment for the correct and economical atomization of materials is our business and **we know that business** thoroughly.

Our production facilities and the completeness of our line enables us to offer the highest quality sprayer at prices that will prove attractive to you.

We will be glad to submit samples to responsible organizations and to consult with them on their spraying problems.

Catalogue on request

ELECTRIC SPRAYIT COMPANY

2104 E. Colfax Ave., South Bend, Ind.

SEND FOR NEW 32 CATALOG

SPRAYIT

REILLY

Coal Tar PRODUCTS
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SOAP and DISINFECTANT INDUSTRY

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Say you saw it in SOAP!

Soap Manufacture

(*From Page 27*)

market for the product. Soap is demanded as a necessity of life, and this demand may be interpreted as both a result and a cause of the industry's growth.

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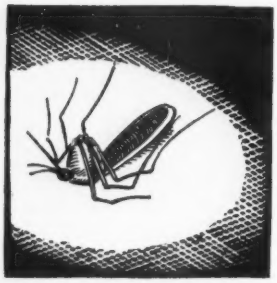

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Say you saw it in SOAP!

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—o—

Urge "Share-the-Work" Plan

(*From Page* 37)

ment by the committee in your own Federal Reserve district.

The soap industry is forward-looking. In this share-the-work movement I hope to see us take an active lead. Unemployment has not hit our factories hard. "We have work: will we share?"

Mr. Edlund's second communication stated: "Replies to my letter about the national 'Share-The-Work' campaign show that the soap industry is acting upon this idea. I am pleased to report that three of the largest companies have adopted the five-day-week. Other companies are reporting other methods of sharing work. To give you some idea of the great variety of ways in which this principle may be applied I am sending you a copy of the latest publication of Mr. Teagle's Co-ordination Committee. This booklet gives typical examples of methods used by some of the 5,000 companies that have adopted the plan.

"If you have not already done so, will you please send the following information about your company:

"1. What systems of work-sharing have you found to be most successful? (See classifications on pages 7 and 8).

"2. To what extent have these methods enabled you to (a) increase the number of employees, or (b) to retain employees who otherwise would have been dropped? Give figures if possible.

"3. Some of you, I know, have not had to decrease production. Have any such companies shared work by reducing hours of labor and employing more workers? (Several such cases are cited in the enclosed booklet. It is to employers thus fortunately situated that the Teagle Committee makes its most urgent appeal.)

"This movement seems to be sweeping the country. The soap industry, I am sure, will feel pride in being among the pioneers."

—o—

The date for the eighth annual dinner of the Drug, Chemical and Allied Trades Section of the New York Board of Trade has been set for March 16, 1933.

—o—

Now,—or Next March?

(*From Page* 83)

not a job which can be accomplished over night. It takes time. For this reason, we cannot understand why insecticide manufacturers do not push their sales efforts on bulk goods harder in the fall even more than they do in the midst of the consuming season.

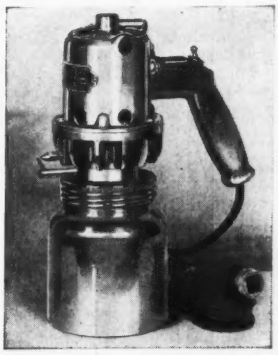
Increase The Sale Of Your Products With Breuer's

TORNADO Electric Sprayers

You can increase the sale of your insecticides by supplying your customers with the proper method of application.

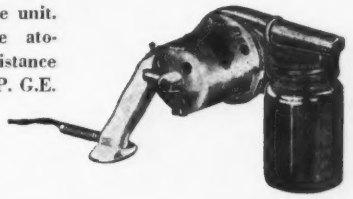
TORNADO Electric Sprayers lead the field. Thousands in use. New developments and improvements in design and construction place TORNADO Sprayers far in advance of out-of-date methods, insuring satisfactory application and encouraging the more frequent use of your product.

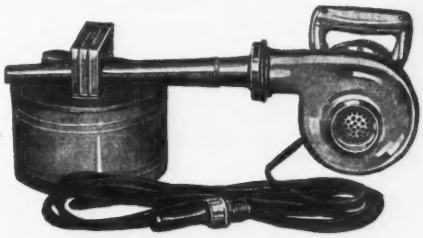
There is no line so complete or that embodies so many exclusive and modern features of sprayer design and operation. Three models—see illustrations and descriptions below.



Model 53 new Compressor Type unit. Will break insecticide into *finest* mist and gas formation mechanically obtainable. Floats throughout spraying area for many minutes—a truly de luxe model! ⅛ H.P. G.E. Universal Motor. 1 quart metal container. 20′ of rubber covered cable.

Model 50 Fan Type unit. A fine insecticide atomizer. Sprays distance of 8′ to 10′. ⅛ H.P. G.E. Universal Motor, 1 pint glass jar. 20′ of rubber covered cable.





Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18′ to 20′. ⅓ H.P. G.E. Universal Motor, Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions.

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